THE FARMERS' CABINET,

AND

AMERICAN HERD-BOOK,

DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC AFFAIRS.

"The Productions of the Earth will always be in proportion to the culture bestowed upon it."

Vol. VII.—No. 6.] 1st mo. (January) 15th, 1843. [Whole No. 96.

JOSIAH TATUM,

PROPRIETOR AND PUBLISHER,

No. 50 North Fourth Street,

PHILADELPHIA.

Edited by the Proprietor and James Pedder.

Price one dollar per year.—For conditions see last page.

Sketch of Robert Bakewell Esq.

The man who is the benefactor of the human race, has a right to expect to live in the memory of posterity. Mr. Bakewell will do so, and although this tribute to his worth comes somewhat late, it will, at least, be appreciated as an offering at the shrine of honest merit.

Robert Bakewell was born at Dishley Grange, in Leicestershire, in 1726. The farm of Dishley Grange had long been in the possession of his ancestors, and those from whom he more immediately descended, held the property on a lease of ninety-nine years, from the family of Phillipps, of Garrendon; it having been purchased in 1693 by a Sir Ambrose Phillipps, by whom it was leased to the forefathers of Mr. Bakewell. The term of the lease expired very shortly before Mr. Bakewell's decease; and the farm, which consists of about 457 acres, then came into the occupation of his nephew, Mr. Honeybourne, who resided upon it until he died, which was about twenty years after the demise of his uncle. But with Mr. Bakewell, Dishley lost all its importance, and his successor failed in becoming even a shadow of the great practical man who had been its previous proprietor.

Perhaps, during the last century, no man did so much towards increasing the agricultural interests of the country as Mr. Bakewell. He was unwearied in his exertions, and enthusiastic in bringing to perfection his favourite pursuits. In every branch of the science he was persevering to the end, and by strenuous exertions made himself master of the different modes of cultivation pursued not only by the English farmers, but also those of foreign cultivators. He did not content himself with the mere knowledge which he had thus laboriously and industriously obtained, but he introduced that system into his own farming practice which is now generally pursued in Leicestershire. But the great glory which is attached to the name of Robert Bakewell, is in the vast improvements which he made in the breed of cattle. The different nations of Europe supplied him with the material, and nature herself might have wondered at the skill which he displayed in bringing her works to a greater degree of perfection. It was from Flanders that he principally procured his famous breed of black cart horses, now nearly if not quite extinct, which have been thus described. They were lighter-legged and flatter-boned than those now in use, but of great strength, more especially in their forequarters, with erect heads and high crested. One of this breed was of such excessive beauty of proportions, that he was likened to the fancied war-horse of the German painters. He must indeed have been a splendid and picturesque animal, for a man of moderate height seemed to shrink under his foreend, which rose so perfectly upright, that his ears stood, (a qualification that Mr. Bakewell deemed indispensable to the beauty of the horse,) perpendicularly over his fore feet. This animal was the entire horse which Mr. Bakewell christened K., and which was perhaps one of the most elegant creatures of his class that was ever bred within the British dominions.

Mr. Bakewell had too much good sense to keep useless stock; he made even his mares work in the team, but they were treated as gently as a man would treat his wife, and the use of the whip was entirely prohibited at Dishley. It is somewhat unfortunate that this fine breed should have been superseded by a heavy-legged race, whose movements are snail-paced, and decidedly inferior for agricultural purposes. Is there no one among our friends who would devote his attention to this important subject?

The pride of Mr. Bakewell was to improve the class of domestic animals, and his celebrity as a breeder of long-horned cattle will ever shed a halo over his name. It appears he selected the finest individuals of the Warwickshire species, principally from the

herds of Mr. Webster, near Coventry, and Mr. Fowler, of Rolwright, which, being crossed with the most excellent of the Lancashire breed, produced a stock of cattle that was held in the highest estimation for a considerable time; but fashion varies even with respect to animals, though the Dishley breed was kept up for some years after the death of Mr. Bakewell, by Mr. Paget, of Ibstock, Mr. Astley, of Addeston, and to a more recent period, by Mr. Huskisson, of South Croxton; though when a sale of the latter gentleman's stock took place, about thirty years after that of Mr. Paget's, there was a great depreciation in the intrinsic value of the cattle, although they were allowed to be some of the best and purest specimens of the Dishley herd.

At this sale the famous bull, Shakspeare, which was bred by Mr. Fowler, by Shakspeare, *pere*, out of Young Nell, fetched 400 guineas, to which the seller appended the condition that he should have the privilege of having the use of him for two cows yearly. The heifers by this animal also sold well, one two years old realized 84 guineas, and another, one year older, 70 guineas. Mr. Bakewell preferred rearing small-boned cattle, and considered them to be in every way the most profitable, both to the farmer and the consumer. He also strongly recommended great attention being paid to the quality of the cows intended for breeders, and justly remarked that, when a sound discretion was not used, the produce often failed, and then the bull was frequently unjustly blamed. He was exceedingly particular in his own selections, and he prized his favourite bull, called Twopenny, so highly, that he refused £200 for him; and he appears to have been somewhat choice of his produce, for he rarely sold any of them, though he let them at high prices for the season.*

Celebrated and excellent as Mr. Bakewell's breeds of horses and cattle were, still more so was his breed of sheep. Perhaps at no period of time, certainly not in his, was such an improvement made in this valuable animal. In the present day cultivators of flowers are continually producing new species, but Mr. Bakewell was beforehand with them, for he may truly be said to have been the producer of a new variety of sheep. Combined efforts frequently produce great improvements; for practical men, by condensing their energies into one focus, may bring forward important results. But Mr. Bakewell's was a master mind; his own skill and genius overcame obstacles that to others appeared to be insurmountable; and his long-woolled sheep became the pride of Leicestershire. It was entirely his own work, and the time he took to complete his wonderful improvement was incredibly short. In our day the Southdowns have been brought to the highest state of perfection by Ellman, Grantham, Webb, the Duke of Richmond, and others, the superiority of whose flocks do honour to the agricultural interests of the country; but they were brought to this state of perfection by the union of several parties; Mr. Bakewell stood alone, and to him we are solely indebted for that beautiful and useful animal, the new Leicester sheep.

It was not on a suddden that Mr. Bakewell attained his high celebrity as a sheep-breeder. It is recorded of him that the first ram he led out, he drove himself to Leicester fair, and obtained only 16s. for the use of him for the season. About 1760, his rams did not sell for more than from two to three guineas each, and after this time he did not receive for their hire more than from 15s. to a guinea per head. He now gradually advanced his terms, and in 1770 he let some of them for 25 guineas. Mr. Bakewell used to tell an anecdote respecting the difference of judgment in respect to the value of cattle. He was once attending Loughborough Tup-market, where he had a ram which he had let for 25 guineas. Soon after the agreement was concluded, another farmer offered to purchase the animal, and Mr. Bakewell jestingly fixed the price at 25s. The farmer considered this too much, and offered 18s., and eventually they parted for 2s. This was something on a par with the judgment of some Leicestershire farmers respecting a heifer which had been purchased for 80 guineas, and which they a few days after priced at £8. This may be considered the first dawning of his fame and fortune. The reputation and prices of his stock so rapidly increased, that in a very short time 400 guineas were given for the use of a ram for the season. One, called the Two-pounder, produced him in one season 800 guineas, besides the produce of his own ewes that were put to him, so it may be fairly calculated that the profits of the produce averaged him 1,200 guineas for one season.

The ardent mind of Mr. Bakewell was brought into action about the middle of the last century, and from that time we may date the improvement of the Leicester sheep. About that period he engaged John Breedon for his head shepherd, and it appears that he

* Mr. Bakewell had, at Dishley farm, several carcasses of the different breeds preserved whole in pickle, which distinctly showed the thickness of the flesh and fat, and also the smallness of the offal. He had likewise skeletons, with distinct portions of the bones heads, ribs, &c., of the animals.

soon became his confidant. There is little doubt that he entered actively into his master's plans, for he had the entire control over the formation of the new breed, under the direction of Mr. Bakewell, but they kept the manner in which it was accomplished a profound secret.* This seems somewhat strange, as Mr. Bakewell was a liberal-minded man, and in after years, the knowledge of his process might have been of essential service to his country. But his whole mind was devoted to the science in which he had engaged, and while he was practically working out his plans, it is probable that if any of his schemes proved failures, he wished them to be kept as secret as possible. In this he acted wisely, for too frequently the observations of "good natured friends," tend to damp the spirit, and check the energies of a man who risks his reputation on the success of his experiments. Hence it is, that we are so little acquainted with the crosses he used to form in his beautiful flock. Conjectures have been various: some have considered that the principal crosses he made, were between the old long-wooled Leicesters, and the ill-formed animal that in those days fed upon the grassy hills of Chorwood forest; but, after all, conjecture is not proof. It may be taken as a fact denying dispute, that all his crosses were made from the best individuals of the different flocks, and these he in all probability, crossed again with some of another breed. His great object was to gain the greatest weight of meat upon the smallest quantity of bone, and to combine this with symmetry of form, early maturity, fine quality of flesh, and a propensity to fatten. Some breeders consider the size of the animal to be too small, but Mr. Bakewell's opinion was, that a greater quantity of mutton would be procured from a given quantity of acres, grazed by a larger number of small sheep, than from a smaller quantity of larger animals possessing less appetite.

Arthur Young, who is no mean authority, informs us that Mr. Bakewell was very curious in the breed of his sheep, and he considered both his rams and his ewes to be perfect specimens. He describes their appearance thus:—"Their bodies are as true barrels as could be seen; round, broad backs, and the legs not above six inches long; and a most unusual proof of kindly fattening, is their feeling quite fat just within their forelegs on the ribs, a point in which sheep are never examined in common, from common breeds never carrying any fat there. In his breed of sheep he proceeds exactly on the same principle as with oxen, the fattening in the valuable parts of the body, and the living on much poorer food than other sorts. He has found from various experience in many parts of the kingdom, as well as upon his own farm, that no land is too bad for a good breed of cattle and particularly sheep. It may not be proper for large stock, that is, large-boned stock, but undoubtedly more proper for a valuable well-made sheep, than the usual wretched sorts found in most parts of England on poor soils, such as the Moor sheep, the Welch ones, and the Norfolks; and he would hazard a moderate stake that his own breed, each sheep of which is worth several of those poor sorts, would do better on those poor soils than the stock generally found on them; a good and true shape having been found the strongest indication of hardiness."

According to Mr. Young, the breed of the sheep was originally Lincolnshire, which was wonderfully improved by Mr. Bakewell; and another person, who visited Dishley in 1790, informs us that he was likely to make by his tups that season, fully to the amount of 3000 guineas. But notwithstanding the large amount of money that Mr. Bakewell was in the habit of receiving from the proceeds of his stock, at the very noontide of his fame he became involved in great pecuniary difficulties, which would not appear to have been brought on entirely by the expenses he bestowed on the necessary experiments for perfecting the improvements of his flock, but from the large number of visitors that congregated together at Dishley. Several of the principal of our nobility were frequently his guests, and Mr. Bakewell, whose disposition was as liberal as his mind was noble, entertained them in the same expensive style as they were accustomed to live in themselves, when at home. This of course increased the expenses of his establishment enormously, and the host of Dishley Grange might truly have told some of his guests, as the Lady Rendlesham once remarked to the last Duke of York, when he took his leave, that Rendlesham House was considered to be the best inn on the road. It was also an unfavourable period for making money by the cultivation of land; the war with America had considerably reduced the value of produce, and the article of wool, which was of the utmost importance to him, was so greatly depreciated, that it was sold as low as nine shillings per ton. All other articles being

* Probably the invariable custom of Mr. Bakewell, not to engage his servants for a term of less than four years might have contributed to prevent the secrets of his system being known. The well-used servant naturally becomes attached to his master, and the honest one will never betray the confidence that has been reposed in him.

also proportionably reduced, his expenses great, and his hospitality unlimited, it cannot be wondered that he found himself in difficulties. But even then, Bakewell kept up his high position, for when his stock was valued, (the unexpired term of his lease being included in the valuation,) there was a balance in his favor, of from £1,500 to £2,000.

As a practical farmer, Mr. Bakewell attained great celebrity. He was in advance of the age, and we may say full half a century before any of his neighbours. It may be questioned if the land in Leicestershire is even now so well cultivated, as Dishley farm was when its possessor died. He adopted the system of irrigation, and turned a small rivulet that flowed along a portion of his farm to such good account, that from it he contrived to water from 60 to 80 acres of meadow land every season. He turned this little brook also to other usefui purposes, making it to feed a mill, and save the trouble and expense of carting his turnips, which being thrown into the stream, were allowed to float down with the current to the barn end, where their further progress was impeded by a grating at the bottom of a reservoir, from which they were taken out and laid up clean and freight free, for the winter's supply. The idea was beautifully simple and eminently useful, but Mr. Bakewell possessed a mind that was continually devoted to the improvement of rural affairs. He pursued the drill system of Tull, never sowing broadcast; both grain and turnips he always sowed by the drill, and kept the ground clean by the horse-hoe. There was a striking contrast also in his system of ploughing and that of his neighbours. Some of them employed from four to seven horses at the plough on a sandy loam soil, and then did not turn up much more than half an acre per day. Mr. Bakewell invariably confined himself to a pair, and stirred up an acre with ease, thus quadrupling the quantity of work done with an equal portion of strength. Dishley, in fact, was a school of practical agricultural reform, and it appears rather wonderful that the system was not generally adopted by the Leicestershire farmers. It is not now unusual in that county to see a string of four or five horses attached to the plough. For a long time the drill system also met with considerable opposition, but within some few years it has been looked upon in a more favourable light. Cultivators naturally look to the amount of profits that are likely to arise from the practice of any separate system; that of Mr. Bakewell did not place him among the wealthy, but had he been less liberal in his ideas, less given to hospitality, less visited by the patrician portion of the community, who entailed enormous expenses upon him, he must have lived and died a rich man, whether it was his desire to do so or not. It does not follow that a system must be erroneous, because it does not at once open a mine of gold to fill the pockets of the inventor. Every system must have time to work, and every effort at improvement deserves, and ought to receive, the strictest attention. A practical agriculturist is of far more value to a nation than even a practical manufacturer, for the benefits the one confers upon the human race are lasting, the other but transient; yet both deserve to be honoured by their country.

Dishley Grange was not exactly what a fashionble auctioneer would "term one of nature's most favoured spots," but under the care of Mr. Bakewell it became more noted for its usefulness than its beauty. Clumps of willows were planted for ornament and shelter, which were carefully cut every seven years, and the wood thus supplied, was brought into use to make handles for rakes, and other purposes of husbandry, manifestly causing a great saving of expense. Even the peelings of the willows were not thrown away, but by the direction of the master-hand, were applied to make the bottoms of the sacks. Swampy as the grounds adjoining the house were, Mr. Bakewell contrived to make even their barrenness available.

The gardens were cultivated rather for utility than for show; the fish-ponds were always kept well stored, and even the drainings from the yard were conveyed to the brook, and thus mixed with the water, used for the purpose of at once irrigating and manuring certain fields belonging to the farm.

It ought to have been remarked that the liberality and high-mindedness of Mr. Bakewell never evinced itself more fully than in his incessant application to the improvement of the Dishley estate. He was but a tenant, but he yearly increased the value of the land he rented, for the benefit of the landlord. He stood forth as a model for all practical farmers to study; an example for all honest tenants to follow. He was indeed a man of rare merit, and it would perhaps be difficult to find his fellow. But, like almost all men who have benefited and enriched their country, and increased tenfold the wisdom of posterity, by the most important discoveries in arts, sciences, and agriculture, Bakewell has been allowed to rest without even a monument to his memory. He devoted his energies to the good of the public; his own immediate interests he disregarded, without once thinking that future ages

would have cause to pay the greatest veneration to his memory. He may be said to have been the first agricultural patriot; for the man who endeavours by incessant exertions to improve the animal creation, is fully as deserving of that distinctive appellation, as is the statesman whose exertions are employed for the perpetuation of the rights and privileges, of his fellow-countrymen.

We are proud of being able to pay this slight tribute of respect to the memory of a great and amiable man, who, by his genius has created and scattered over the green hills and verdant meadows of his native land, an animal whose beauty and usefulness will ever be a living monument to record his name. To him the English agriculturists owe an imperishable debt of gratitude; and we will conclude with a quotation from Arthur Young, who says: "Let me exhort the farmers of this kingdom to take Mr. Bakewell as a pattern in many points of great importance; they will find their account in it, and the kingdom in general be benefited not a little."

Mr. Bakewell died October 1st, 1795.

London Farmers' Mag.

For the Farmers' Cabinet.

Farms on Leases.

NOTHING appears more rational, than the views that have been taken in the Cabinet, of the English system of Leasing; at the same time, I suppose it must be admitted, that the difference between the situation and circumstances of this country and Europe, precludes the adoption of much that has proved of the most essential importance, in a land where the mode of cultivation, appears to have reached a sort of ultimatum, created and fostered by the mutual security, afforded by it, to both landlord and tenant. In a late conversation on this interesting subject, with a fellow subscriber,—one who has lands which he lets, either on shares or money rent,—I read to him, from a late number of the Quarterly Journal of Agriculture, some observations, which have gone far to satisfy us, that the idea, of engrafting upon our mode of letting, a portion of a system that has worked so well, and produced such unequivocal marks of good understanding and excellent management in the old country, is not so preposterous as we at first imagined. True, there are tenants who would not be willing to bind themselves for life, or twenty years, to the cultivation of another man's land; and there are landlords, who could not, and would not be willing to put their lands, for so long a period, out of their immediate possession; but there are many of both, who would be ready to enter into such an arrangement, could it be made plain that such would be to their mutual advantage,—an easy task, it now appears, both to my friend and myself, and affording the most pleasing prospect of future and ultimate gain to landlord and tenant.

To those who have not studied the subject, the thing will be apt to be considered difficult of application; but it would, in reality, be unattended by any thing but good; and the rules for guidance, laid down in the work above mentioned, are so plain and satisfactory, that nothing of the kind would be experienced. Allow me to transcribe from its pages, a few passages that will, I conceive, be of considerable interest to your readers.

"One objection, which I anticipate to the extensive letting of farms on lease is, that it would render the farmer too independent. Now, that it would injure the fair and legitimate influence which the land-owner ought to have over the cultivator of the soil, I deny. The source of a land-owner's legitimate influence, consists, not in his power to do *evil*, but in his ability to do good: indeed, the connection between landlord and tenant is too intimate; their interests are too much alike, and the value of a good understanding at all times too apparent, to cause any diminution of the landlord's *proper* influence, or any abuse of the tenant's temporary power under the lease system. And that the tenant's temporary power or independence would lead him to neglect his farm, is equally unlikely; his own interest being guaranty that he would not injure his land by improper management during the earlier years of his lease, while an effective covenant or stipulation would guard the latter years. Thus, if we let a farm for twenty years, allow the tenant to manage as he thinks best, for sixteen years,—a few injurious crops or injudicious rotation excepted,—but compel him by a precautionary clause in his lease, to pursue a certain course of cropping and tillage for the last four years: upon this plan, if the tenant's system be judicious, he might have his lease renewed at the expiration of the sixteen years, when he would again be at liberty to pursue his own course, and the compulsory clause would never come into operation. In every lease, however, as few astringent covenants as possible should be introduced,—they merely retard and annoy the good farmer, and rarely improve the unskilful. We all know, and freely admit, that a *tradesman* should be left perfectly free in his operations and the management of his affairs, and can easily perceive how inju-

rious it would be to his interests, for the owner of his house to compel him to a purchase or a sale, or the peculiar management of any part of his business,—every fetter, therefore, which at all interferes with the *farmer's* search after the latent treasures of the earth, injures his success.

"When a tenant takes a farm on lease, he ought to value the gross product of the same, not at what it will produce by superior management, but at what it has produced in its present condition; if he can, by superior skill, make it produce one fourth more, his lease insures him the benefit of it, and encourages him to continue his improvements; and when a depreciation of prices takes place, if his produce does not fetch as much as formerly, he finds that he has more in quantity; so that the aggregate value shows in his favour; but should brisk markets come, he has both good prices and an increased quantity of produce. On a lease of twenty years the tenant is left at liberty to manage as he thinks best, so as to give full scope to his skill, industry and capital; and the result will be seen, in the more judicious system of arrangement in regard to rotation, draining, &c. The evidence of Mr. R. Hope, a tenant on lease, shows this expressly; for he says, he farms 650 acres of land; he has deep-drained the whole of it; has limed the whole farm at an expense of $50 per acre,—total cost, 32,500 dollars!—and furrow-drained to the amount of $1200 during the last two years. But this would never have been done, if he had had no lease; and the evidence of every other agriculturist is corroboratory; all showing great improvements, and all ascribing them to the protection afforded by leases."

And what disadvantage would accrue, were a land-owner to rent his estate on a lease of 14 or 20 years to a responsible tenant,—one who, by his good management would be adding yearly to its intrinsic value? In the rental of a *house* even, is it deemed injurious to the owner's interests, or detrimental to the sale of it, that it is rented on lease for a fixed sum, to a tenant who is punctual in the payment; who keeps it in repair and is continually improving it by judicious additions to its conveniences? It is true, there might be an individual who would be desirous to purchase, with a view to a residence; but there would be, in all probability, ten others, ready to give its full value, as a safe investment of capital, rather than purchase elsewhere, with the chance of the premises lying for a season unoccupied and going to decay; with the fear of the tenant's clandestine removal before rent-day, or rent-pay,—the *danger* of which is so well known, and the *reality* so often experienced. But in the case of a *farm*, the land is continually and materially improving in value by being tenanted, and let to a responsible person on a lease, sufficiently long to justify an outlay of ingenuity or capital, in the purchase of lime and manures of different kinds, the expensive but profitable process of under-draining, clearing, planting and pruning; all which, as we have seen above, would willingly be undertaken by a tenant who has the security of a lease to proceed upon. Now, two things are certain,—no man ever yet did the *honest* thing by a farm, that is rented from year to year, and no land ever could do the *generous* thing by a yearly tenant. What say our land-owners,—are they willing to put the question fairly to issue?

One question more, and I have done. I have now in *one* eye, a farm of 45 acres of land that has been let upon shares until it is as poor as death, the owner all the while complaining, that he has never been able to meet with an honest tenant,—one who would do the land justice. In the *other*, a man who is possessed of every requisite to raise the farm to the highest pitch of improvement, except a capital to stock it and carry it on. Now, what objection could be made to the proposal, that the land-lord should stock the farm and let it on a lease of 14 or 20 years to this man, at the sum for rent that he has received on an average of the last seven years, or if you please, a little more? He would hold, as his own, the stock for security, and charge interest for the same; as also, an additional per centage on the sum so expended, to cover possible contingencies, but guarantying to the tenant the use of the stock, until he is able to redeem it at a price agreed upon. Will it be thought that the tenant would derive too great an advantage from such an arrangement? I conceive not, if it be remembered that to his labour and ingenuity the estate is to owe all its improvement, and not to the landlord's money-capital, as, for the use of that, he will have to pay interest. But I seem to hear some one exclaim, "who would be willing to take all this *trouble?*" I answer, would to heaven that I had been favoured by Providence with the *means*, I would soon find the way to accomplish the *end*, and consider it a *pleasure*. In my next, I will endeavour to cast up the quantum of good that might be accomplished in this way, by showing how small a sum of money would be sufficient to settle a man for 20 years as an integral part of the soil, and the paradisaic effects that would be sure to emanate from such a pure source of enjoyment.

Vir.

27th Dec., 1842.

The Swallow.

So little was known of the emigration of the swallow fifty years ago, that Dr. Johnson in one of his conversations with Boswell, makes the following observation; 'Swallows certainly sleep all the winter. A number of them *conglobulate* together, by flying round and round, and then all in a heap throw themselves under water, and lie in the bed of a river.' This idea is still prevalent amongst many persons who reside on the banks of the Thames. They see swallows settling and roosting by hundreds and thousands on the willows growing on the aytes of the river, which are bent down to the edge of the water by the weight of the birds, and the next day, perhaps, not one is to be seen. It is therefore concluded, that they have immersed themselves.

It is an interesting sight to watch the young chimney swallows after they have quitted their nest, sitting quietly on the top of a chimney and receiving, one after another, the food brought to them by the parent bird. During the period of incubation, the male shows the greatest affection for, and attention to, his mate, and serenades her from the chimney top as soon as the first gleam of light appears.

Kalm, in his travels in America, tells a pretty anecdote of the swallow, which, he says, was related to him by a lady of great respectability, who was a witness of the fact.

'A couple of swallows built their nest in a stable belonging to the lady in question, and the female laid eggs in the nest, and was about to sit upon them. Some days after, the male was seen flying about the nest, sometimes sitting on a nail near it, and uttering a very plaintive note, which betrayed his uneasiness. On a nearer examination, the female was found dead in the nest, from which she was removed, and her body was thrown away. The male then went to sit upon the eggs, but after being about two hours on them, and perhaps finding the business too troublesome, he went out and returned in the afternoon with another female, who sat upon the nest, and afterwards fed the young ones, till they were able to provide for themselves.'

I have frequently noticed how apt swallows are to settle on the ground, in a row, or perfect line. I have no doubt many persons must have observed this, while they have been walking near the Serpentine River in Hyde Park, during a fine autumnal day. The birds, after hawking for flies upon the surface of the water, will at once settle on the path which extends across the head of the river, in so perfect a line, that one looks at it with astonishment as the simultaneous act of the birds. Their flight is equally sudden and regular on the approach of an intruder. I have also noticed this regularity of line in young birds, while waiting for food from their parents.

I observed a curious departure from the usual mode of building, in the martin during this summer. The circumstance occurred at the Virginia Water, in Windsor Great Park. Near the fishing temple on that beautiful lake, there is a cottage, part of which is covered with a *trellis*, against which a pair of swallows had endeavoured to build their clayey nest, the spot they had chosen being protected from the weather by the large and projecting wooden eaves of the cottage. Whether they found any difficulty in fixing the earth for their nest, in the peculiar spot they had selected, or from some other cause, the vacancy only between the wall and the trellis was filled up with a small deposit of clay, but the nest itself was built of grass and straw, and was fixed alike in the trellis and the deposit of clay. Here I saw the swallow sitting on her eggs, the depth of the nest being very inconsiderable.

Before I conclude this notice of these interesting 'guests of summer,' I would plead in their behalf, for the purpose of endeavouring to put a stop to the cruel custom of wantonly shooting at them. Independent of the cruelty of starving whole nests of young ones by killing the old birds, they may be scared from a neighbourhood by being frequently disturbed; and then comes a redundancy of insects, producing blight, mildew, and other disorders on our corn and plants. We are also deprived of their hilarity, their thousand meanderings in the air, their pretty twitterings, and all the agreeable associations which their presence gives rise to. The swallow-shooter is, moreover, guilty of a breach of hospitality, by destroying a bird which has voluntarily placed itself under his protection, and which has always been considered as a privileged guest.

> 'The swallow, privileged above the rest
> Of all the birds as man's familiar guest,
> Pursues the sun, in summer brisk and bold,
> And wisely shuns the persecuting cold:
> When frowning skies begin to change their cheer,
> And time turns up the wrong side of the year,
> It seeks a better heav'n and warmer climes.'
>
> DRYDEN.

Since writing the above, I have had another opportunity of witnessing a peculiarity in the habits of the swallow. Residing near the River Thames, and having a window opening close to its banks, I frequently amuse myself with watching the vast congregations of them as they skim along the surface of the

water. But a few moments since, I heard a swallow, apparently at some height in the air, utter two shrill notes; on hearing which I observed the whole of the flock quit the water, and rise into the air, so as almost to disappear from the sight. After a short time they returned to hawk for flies, and dip their bodies on the surface of the river at the place they had just before quitted. If the notes were not intended as a warning of approaching danger, I could almost fancy that it was a call for them to partake of a banquet of insects which had suddenly made their appearance elsewhere.

On mentioning this circumstance to an observant friend, with whom I have had many very agreeable conversations on Natural History, he informed me that when he was lately at Malvern, he had an opportunity of observing the effect which the two notes I have just described, had on a large assemblage of swallows. They had congregated in great numbers on the roof of a house at that place. The preceding evening had been cold and somewhat frosty, so that early in the morning the swallows were so torpid that he caught two or three of them in his hand, as they rested on the roof near the window of the room in which he slept. While they were in this state he heard two shrill notes from a swallow, and in an instant the whole of them took wing simultaneously, and having made two or three circuits in the air, disappeared altogether. He fancied that these circuits were preparatory to their migration, but they were more probably a notice that food was at hand. At all events it seems clear to me that there is a master or leading swallow, who guides the movements of the rest while they are as usual, congregating previous to their migration. Having mentioned this circumstance, I trust that it will engage the attention of others, so that further light may be thrown on this curious fact in the economy of the swallow.

Jesse's Gleanings.

Oil of Indian Corn.—This oil is obtained in the course of the process of making whiskey. It rises in the mash-tubs, and is found in the scum at the surface, being separated either by the fermentation or the action of heat. It is then skimmed off, and put away in a cask to deposit its impurities; after which it is drawn off in a pure state, fit for immediate use. The oil is limpid, has a slight tinge of the yellow color of the corn, and is inoffensive to the taste and smell. It is not a drying oil, and therefore cannot be used for paint, but burns freely in lamps, and is useful for oiling machinery.—***Silliman's Journal of Science and Arts.***

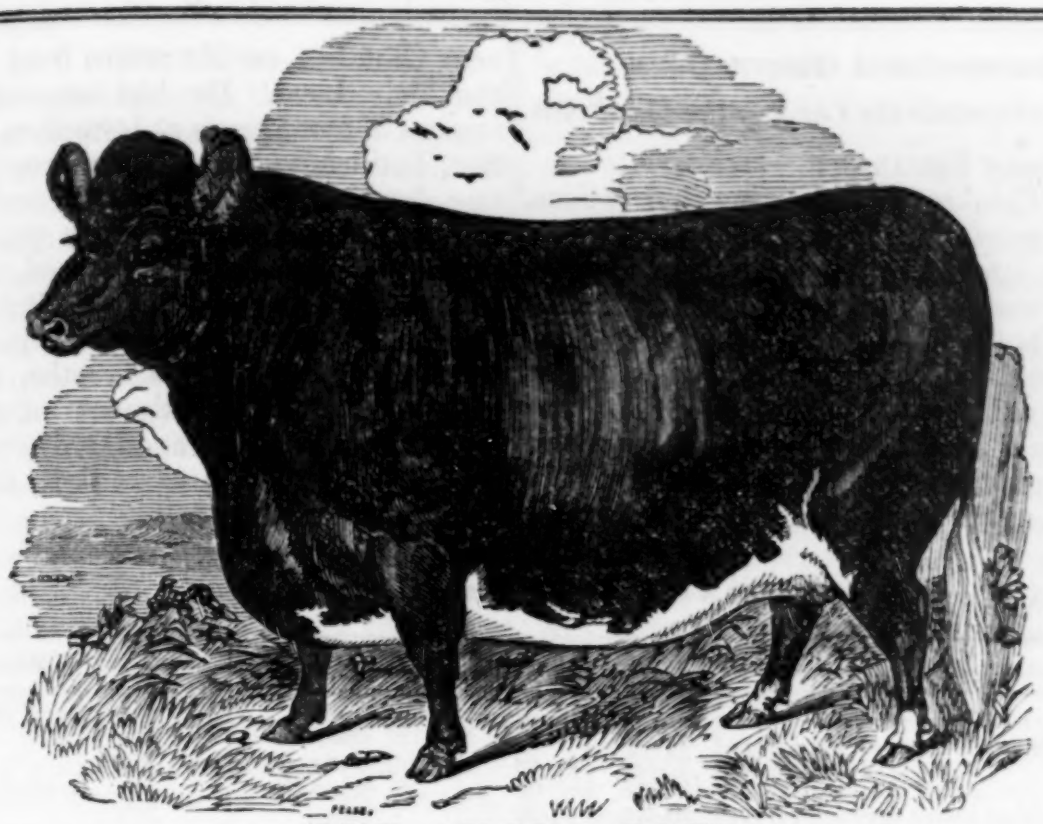
For the Farmers' Cabinet.

Magnesia.

I pray you, Messrs. Editors, give me space for a very short extract from a paper lately read by Professor Johnston, before the Highland and Agricultural Society of Scotland, "On the improvement of oats growing on moss," as I conceive, it will be found interesting to your readers, during the present exciting controversy which is being carried on through the pages of the Cabinet. The Professor says,—

"It is well known to practical agriculturists, that oats grown on reclaimed peat or moss lands, are apt to produce much straw, but to yield an ear which is poor and badly filled; the straw also being soft and void of that hard shining surface, by which ripe oat-straw, grown upon sound land, is generally distinguished. The conclusion we naturally draw, from a knowledge of the effect of an application of clay to these peaty soils, is, that the defect consists not in their *containing* any noxious ingredients, but in their *want* of something necessary to the healthy growth and maturity of the plant; which the clay contains, and is able to supply. The first deficiency in oats grown on moss, of which I was made aware was, that the ear did not fill,—in such a soil, the acknowledged deficiency is in mineral matter, and I therefore considered it likely that the plant found it difficult to procure the mineral substances which are always present in a full and healthy ear. These are chiefly the phosphates of lime and *magnesia*, and I consequently recommended a trial of bone-dust mixed with certain other substances, which might yield also a further supply of nitrogen, which is known to be necessary to the production of the seeds of nearly all plants. This mixture contained no magnesia, *to supply which, however, it was not improbable that the lime, added to the land might suffice;* as very many limestones contain an appreciable admixture of magnesia. These suggestions were carried into effect in a skilful and zealous manner, and the results, in reference to a trial of bones dissolved in sulphuric acid, mixed with a small quantity of nitrate of soda, were thus reported by Mr. Fleming, 'I examined the oats again a few days before they were cut, when I was much satisfied; the straw appeared to me as stiff and shining, and the ears as well filled, as if they had been grown upon stiff loam; and I consider the same dressing applied to grain crops upon moss, will insure a good crop of well-filled oats.' So far as a trial on one locality can be relied upon, therefore, we may consider this result exceedingly satisfactory."

T. Bennet.



THE ANGUS COW.

The origin of the Angus-shire Scotch breed, of polled cattle, is so remote, that no account of their introduction into the country can be obtained from the oldest inhabitant; some of the first qualities which attracted the attention of the improvers of this valuable breed, were their peculiar quietness and docility; the ease with which they were kept, and the few losses which were incurred while confined in their stalls, from this circumstance; as also, the convenience of disposing of a great number of them in the same space of stable room; their natural fitness for stall-feeding, and the rapidity with which they lay on fat. This has brought them into much repute in their own market, as well as in England, whither they are sent in numerous droves, for the supply of Smithfield market, under the denomination of ***Galloways***. They are usually fed off at three years old, and reach to an average weight of 840 lbs. The greater part of them are black, or with a few white spots; next, yellow or dun, brindled, and silver yellow. They are a most valuable breed, and have rapidly gained ground on the horned cattle of that part of the country; and when the agriculturist speaks of the Angus breed, he refers to the polled, and not to the horned species.

The preceding cut is the portrait of a heifer, bred and fattened by Mr. Watson; she was exhibited at the Perth show, and obtained the medal for extra stock of superior quality. At the Smithfield Society's show, she also received the medal, in the class of extra stock; and the Highland Society requested that she might be sent there, as a specimen of the excellence to which this breed of cattle could be made to arrive: she was then four years and a half old. She was publicly exhibited for a considerable time before she was slaughtered, and realized a large sum for her owners. She was out of a very small cow, with a remote dash of Guernsey blood, yet retaining all the best features of the pure Angus breed; the bone of her fore-leg, which is still preserved, is not thicker than that of a red deer, and she was exceedingly active to the last. When slaughtered, her breast was not quite eight inches clear of the ground, and her *inside* fat was equal in weight, to a quarter of her whole weight of beef; her dead weight being 1,800 pounds, although it was imagined she had not arrived at her point of extreme weight.

The quantity of milk yielded by this favourite breed of cattle, is various. In the hilly district, from two to three gallons per day; but it is very rich: in the lowlands, they will give five gallons a day; they were once considered about the best breed of dairy cows in Scotland; but since the breed has been more improved, and greater attention has been paid to the fattening qualities, they have fallen off in their character for the pail. Many of these cows are kept for suckling calves; they are selected for this purpose, so as to calve in January or February, when a stranger-calf of the same age is procured, and both are suckled by her until the 1st of May, when they are weaned, and two others are procured; these suck until the 1st of August, and are then weaned, when a single calf is put into the pen and fatted for the butcher, the season being then too late for rearing; when the cow, having suckled *five calves*, is let off her milk.

Barometrical Observations,

Made to ascertain the Level of the Dead Sea.

To Professor Silliman:

Sir,—Thinking the following observations, made to ascertain the level of the Dead Sea, might be interesting to you, I take the liberty to forward the same. They were made by Sir David Wilkie, W. Woodburn, Esq., and myself, in March last, as you will perceive by reference to the dates.

You will be concerned to learn, that the talented gentleman who suggested these observations, (Sir David Wilkie,) recently died near Gibraltar, on his return from a visit to the Holy Land. He had secured a large amount of memoranda at Jerusalem, the Dead Sea, Bethlehem, and other places in Palestine, from which he hoped to create a new, and better order of Scripture painting; in which, had his life been spared, he would undoubtedly have succeeded. But his work is done, and the gifted pencil which has so often made the canvass breathe, is forever laid aside. With sentiments of respect, I remain your obedient and humble servant,

E. R. Beadle.

Aleppo, Aug. 27, 1841.

BAROMETRICAL OBSERVATIONS.

Places.	Barom.	Therm.	Weather.	Time.	Remarks.
Jaffa	29.958	59¼	fine.	Mar. 1st.	Level of Mediter.
Jerusalem	27.438	55½	fine.	" 3d.	
St. Saba	29.352	68	threat'ning rain.	" 4th.	
Dead Sea	31.372	68	do. wind N.	" 5th.	Level of Dead Sea.
One half hour above Jericho	30.575	76	rain.	" 5th.	
Two hours further up	29.106	67½	foggy.	" 6th.	
Four and a half hours above Jericho	28.406	70	fine.	" 6th.	
Jerusalem	27.278	64½	high wind.	" 6th.	

Recapitulation, without reference to thermometer:

Jerusalem, higher than the Mediterranean	2520	feet.
St. Saba, " " "	606	"
Dead Sea, lower " "	1414	"
Jericho, " " "	617	"

From "Silliman's Journal of Science and Arts:" for Jan. 1842.

For the Farmers' Cabinet.

Bee-keeping.

Messrs. Editors.—Having some leisure moments on hand, I thought I would furnish a few passing remarks under the head of bee-keeping, for your valuable paper. There are some excellent articles on this subject, in the several volumes of the Cabinet, already, but I conclude that what I may have to say, can do no injury, if it does no good; I wish the matter revived.

Many persons deprive themselves of a great luxury—one of the most delightful "sweets" of life, because they believe the keeping of bees is both troublesome and unprofitable. Bees, however, strengthen the local, and home attachments of their owner, if he will interest himself in their curious operations, and they will yield him into the bargain, with but little cost of time or care, an article of profit as well as of luxury. If we commence keeping bees, with an apprehension that nothing more is necessary, than to provide them with hives in the first place, and to take their honey in the autumn, we shall probably be disappointed. Like the tree we plant, or the flower we would enjoy, they require some nursing. We must guard them as much as possible from their enemies, provide them with pastures of buckwheat, and white clover, occasionally feeding them, when we find that our avarice has deprived them of more of their provender, than they could afford to spare. Many persons are discouraged from keeping bees, by the disinclination they feel to the common practice of killing them in the autumn, when the honey is procured. But let me remind these, that the substitution of Hall's self-protecting hive, or some one of the many other improved kinds now in use, for the old fashioned box, would obviate the necessity for the unpleasant recurrence to the brimstone match. This is easily done by the poor as well as the rich. And every one may have on his table, one of the *sweetest* luxuries of life, furnished by servants who work without price, affording to their attentive owner, as they progress in their operations, ample compensation for all the trouble they give him. Their honey then, is clear gain. Suffer me to close my short article in the language of the old French Bishop, who, when any of his curates applied for an improved living, would only reply, "keep bees—keep bees." Yours, &c.

E. B., Jr.

Union-town, Pa., Nov. 21, 1842.

Exercise.

Many people look upon the necessity man is under of earning his bread by labour, as a curse. But it is evident from the structure of the body, that exercise is not less necessary than food for the preservation of health; those who labour are not only the most healthy, but generally the most happy part of mankind. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant agriculture, every where evidently proves it to be the most healthy, as well as the most useful employment.

The love of activity shows itself very early in man. So strong is the principle, that a healthy youth cannot be restrained from activity. Our love of motion is surely a strong proof of its utility. It seems to be a law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence.

Inactivity never fails to produce a universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed. How can persons who loll all day on easy chairs, and sleep all night on beds of down, fail to be relaxed; nor do those much mend the matter who never hardly stir abroad but in a coach.

Glandular obstructions generally proceed from inactivity. These are the most obstinate maladies. So long as the liver, kidneys and other glands duly perform their functions, health is seldom much impaired, but when they fail it is difficult to be restored.

Weak nerves are also the constant companions of inactivity. We seldom hear the laborious complain of weak nerves. This plainly points out the sources from which nervous diseases generally originate, and the means by which they may be prevented.

It is absolutely impossible to enjoy health, where the perspiration is not duly carried on; but that can never be the case where exercise is neglected. When the matter which ought to be thrown off by perspiration is retained in the body, it vitiates the humours, and occasions the gout, rheumatism, &c.

No piece of indolence injures the health, more than the custom of lying in bed too long in the morning; the morning is undoubtedly the best for exercise, as the air braces and strengthens the nerves. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

Every person should lay themselves under some sort of necessity to take exercise. Indolence, like other vices, when indulged, gains ground, and at length becomes agreeable.—Hence many who were fond of exercise in the early part of life, become quite averse to it afterwards. This is often the case with gouty and hypochondriac persons, and frequently when their diseases are difficult to cure.

Indolence not only occasions diseases, and renders man useless to society, but promotes all manner of vice. The mind, if not engaged in some useful pursuit, is constantly in quest of some ideal pleasures. From these sources proceed most of the miseries of mankind. Certainly man was never intended to be idle. Inactivity frustrates the very design of his creation, whereas an active life is the best and greatest preservation of health.—*Oracle of Health.*

A great Work of Art—The Box Tunnel.—The Great Western Railway, England, is a magnificent work, and is marked by many extraordinary indications of labour and enterprise. It is the longest independent line of railway completed in England. The "Box Tunnel," which forms one of its principal features, pierces through Box hill, between Chippenham and Bath—part of which is 400 feet above the level of the railway. The tunnel is 9,680 feet long, 39 feet high, and 35 wide, to the outside of the brick work. The excavation amounted to 414,000 cubic yards, and the brick work and masonry to more than 54,000 cubic yards. About 30,000,000 of bricks were used. A ton of gunpowder and a ton of candles were consumed every week for two and a half years; and 1,100 men and 250 horses were kept constantly employed. For a considerable distance, the tunnel passes through free stone rock, from the fissures of which there was at times an immense influx of water. This formed such an impediment, that the work was on one occasion discontinued for a long time. But the water was finally pumped out through the agency of a steam engine of fifty horse power, which threw it out at the rate of 32,000 hogsheads a day. The contractors, Messrs. Bremer and Lewis, deserve immense praise for their indefatigable exertions.—*Selected.*

Washington Cake,—So called, because it was a favourite at the table of Gen. Washington. *Recipe for making.*—Take two lbs. of flour, one quart of milk, with an ounce of butter, heated together—put the milk and butter into the flour when it is about lukewarm, add a cent's worth of yeast, three eggs and a tea-spoonful of salt; place it in pans over night, and bake it in the morning, in a quick oven for three quarters of an hour.

For the Farmers' Cabinet.

Setting Post and Rail Fence.

Messrs. Editors.—The present low prices of grain and farm-produce generally, with a scarcity of money unparalleled, should induce us to be careful in the expenditure of our means. In this spirit, I propose to show the readers of the "Cabinet" how they may save a considerable sum annually, by adopting my plan of making post and rail fence. It is the custom in this part of the country, to hire a person expressly for this purpose at 12 to 15 cents per panel, with board—an extravagant price, at which he can earn about a couple of dollars a day; but I have for the last 15 years, done this business by means of my *farm hands*, on rainy days, under a shed, all hands being employed at the same time. I have sometimes as many as a thousand posts before hand, ready to set at leisure times, when the farm hands can best be spared; and have made and set 2000 panels of post-fence within the year, at a cost of five cents a panel only; thus saving 150 dollars per annum; having the work better done, and at the most suitable times. I have ever found it an easy task to teach my men to make post-fence; with careful handy men and proper tools, there is neither art nor difficulty. The price for farm labourers in this county, is not more than from eight to ten dollars per month; I therefore calculate that by my plan I save 50 per cent. in expenses, besides the advantage which I obtain by having an extra hand at harvest or busy times at low wages; and I am sending over the country, when my men leave me, good post-and-rail-men accustomed to the business.

I purpose soon to show, from my own experience, how a man can lime his land, and double his crops; by which, the original cost of the lime with its interest, shall be returned within three years from the time *of putting* the lime on the land; and in the mean time remain, respectfully,

Henry Cazier.

Summit Bridge, Del., 15 Nov., 1842.

Small Productive Lot.

David Wedgwood, of Greenland, has gathered this fall from 1¾ acres of land, the following crops:—284 bushels of potatoes; 86½ bushels of Corn; 19 bushels of apples; 6¾ bushels of beans; 6 bushels of green peas; 5 bushels of currants; 4 bushels of red cherries, and 4 bushels of rare-ripes! (peaches?) If our farmers had only half the land they now occupy and would spend the same amount of labour and manure they now do upon the whole, we should hear no more of "going to the far West."—*Bost. Cultivator.*

A large Pear tree in Indiana.

We have, in our State, a pear tree so remarkable, that, if you have seen no notice of it, the following may be of some value. We heard of it from various gentlemen, and saw some notices in country papers, which interested us in gaining better information. One of our nurserymen being in that part of the State, we requested him to visit and gain exact information. He is an accurate man, and his account may be depended upon.

This tree, one foot above the ground, measures *ten feet* in circumference, and *six and a half feet*, at nine feet above the ground. The space covered by the branches, from outside to outside, is sixty-nine feet; that is, the circle formed by a line described around the ends of the branches, would be sixty-nine feet in diameter.

In the year 1834 it yielded one hundred and thirty-four bushels of pears; in the year 1839 it produced eighty bushels; and in the year 1840 it produced one hundred and forty bushels. In one other year, (but which year the account before me does not state,) it produced one hundred and thirty-eight bushels.

This tree grows about ten miles north of Vincennes, Knox Co., Indiana, and is said to have sprung from a seed planted some thirty-five or forty years ago, by a Mrs. Ockletree. The tree is a very rapid grower.

It is perfectly hardy, a constant bearer, and, I need not say, of an enormously productive kind. The fruit is about the size of a turkey's egg; rating as to quality, with about the third grade of dessert pears. It is a fall; early fall pear. The accounts of the time between the planting of the seed and the bearing of this tree, vary from nine to fifteen years. The original owners are dead. We have the fruit growing in our nurseries, near town, and grafts may be sent, should any gentleman in your neighbourhood desire it. I regret that the young man did not ascertain the height of the tree. I am, respectfully, yours, H. W. Beecher.

Indianapolis, September 29, 1842.

Magazine of Horticulture.

"The Exhibitions and rewards of Agricultural Societies, have given an impetus to the spirit of experimental research in the bosom of the *mechanic*, and the result is, an advance in knowledge, equal to that made in any other branch of the practice of agriculture, by the adoption and agency of the same spirit. A practical commentary on this, is offered by the fact, that one maker of Ploughs in England (Ransome of Ipswich,) exhibited no less than thirty-six varieties of ploughs at the last meeting of the Royal Agricultural Society of England."

For the Farmers' Cabinet.

The Peach Worm.

It is quite clear to me, that the death of the Peach Tree is not attributable to the ravages of the worm. A very intelligent, careful, and observant Jersey-man, long engaged in the cultivation of the peach tree, informs me, that although he has taken all the care and pains imaginable to protect his trees from the worms, and has been quite convinced that no worms had ever made an attack upon them, yet he has found his trees to decay and die, just at the same age as those of his neighbour, who had never hunted a worm in his life. His trees, therefore, were as effectually destroyed by the disease called the *yellows*, as his neighbour's were by the worms—another proof, if that be wanting, that the worms are the *effect* of disease and not the *cause;* a new doctrine, but true.

Then comes the inquiry, how can the evil be prevented? Some one has proposed to raise stocks of the common wild plum, by sowing the seed, and budding them in the rows, about two feet from the ground, calculating that trees thus raised would produce fruit the third year from the seed; and giving it as his opinion, that the stock would keep pace in growth with the budded tree, so that there would be no enlargement or contraction above or below the place of budding. Is there novelty in the suggestion, or have any of your readers experience of the result?

I have perfect faith in the beneficial use of calcareous substances applied to the roots of trees, sensible, as one of your correspondents has observed, that "oxygen is the basis of acidity," with which all putrid substances are charged: and it is with this view that Major Reybold of Delaware—that first of cultivators of the peach, for he and his sons and sons-in-law now number 78,000 peach trees planted in orchards—is at this time actively engaged in dressing his trees with shell-marl, by depositing a quantity at the root of every tree, to be pulverized by the frosts the ensuing winter. He also cultivates his orchards with the plough; turning a shallow furrow over the whole surface of the land, three times during the summer—a weighty affair, seeing that one of these orchards contains more than 100 acres—by these means he conceives that he renovates the land and benefits the health of the trees, which are indeed in full vigour, although many of them are very old, and the size of some apple trees of mature growth. I remember also, that Mr. Dager, one of the proprietors of the lime-quarry, mentioned at p. 309 of the 4th vol. of the Cabinet, the lime from which was proved by analysis to yield 96. 6 per cent. of carbonate and not a trace of magnesia, increased the size of the fruit of an apricot tree three-fold, by digging in around its roots a quantity of lime; adding also to its flavor in an equal degree. I conceive that the readers of the Cabinet would feel under obligations to that gentleman, if he would inform them, through its pages, of the quantity of lime applied; as also at what season of the year the experiment was made; stating the effect on the growth of the tree and its lasting energies; whether the lime was hot or slacked; and any other particulars relating to the interesting subject. A. T. B.

November 22, 1842.

Cranberries.

"The cultivation of the cranberry (*oxycoccus macrocarpus*) has not, we believe, received much attention. Most of those usually exhibited in our markets, are gathered by the country people from the bogs and swamps where they grow *wild*, without any assistance whatever from the hand of man. Like all our native fruits, however, the cranberry is susceptible of being improved by cultivation. In Massachusetts many farmers cultivate from one to a dozen acres, and as the fruit brings readily a dollar per bushel in the Boston market, they find them the most lucrative crop they can raise. It is stated in the New England Farmer, Vol. ix. No. 18, that Mr. F. A. Hayden, of Lincoln, in that State, raised, in 1830, four hundred bushels, for which he received four hundred dollars in cash. This is profitable farming.

"Kenrick, asserts Sir Joseph Banks, who had taken pains to obtain the *oxycoccus macrocarpus* from America, harvested in 1831, from a square of eighteen feet each way, three and a half Winchester bushels, being at the rate of 460 bushels to the acre. The soil most suitable to the culture of this plant, is a low, moist and swampy muck, but large crops have been taken from lands in every respect precisely the reverse of that in which they flourish in their natural state. Even light sandy loam, and in which there is a predominance of vitreous or silicious matter, if manured with compost of clay, muck, and swamp mud, and kept uniformly and moderately humid, will produce excellent cranberries. It is even asserted by those who have had ample experience in the business of cranberry culture, that the vines, under this treatment, will not only be much more thrifty and prolific, but that the fruit will also be much larger, fairer, and of better flavor than that gathered from vines in their natural state. On most farms, however, there are numerous low places which might

be advantageously devoted to this plant, and wherever such places are to be found on a farm, they should unquestionably be selected in preference to artificial or compounded soils. The method of planting, in such locations, is to dig holes in the turf, one or two, or two and a half feet deep and two feet over. Into these holes are placed the sods or compact turfs, containing the roots which are then carefully covered with the soil, and a sprinkling of beach-sand thrown over the hill. The hills should be four feet apart each way, which gives ample scope for the vines to trail or branch out. Plants, cultivated in this manner, come rapidly into bearing, after which nothing more is requisite for several years, than merely to give them a slight dressing, occasionally, and to supply new plants where the old ones have decayed, or died out. A plantation, managed in this way, is a most valuable appendage to any farm; and in this section of the country, where the fruit brings one dollar and fifty cents, and often two dollars per bushel, it would be peculiarly so. The labour of harvesting the cranberry is very simple, and very expeditiously performed by means of a rake, constructed exclusively for the purpose, and with which, in favourable seasons, a skillful hand will gather, with ease from fifty to a hundred bushels a day."

Fallowing.

Land dries much sooner when stirred than when left untouched: simply harrowing the surface dries the soil rapidly, when the weather is fine; and why is this? It is, because the water and air in the unmoved soil is in a comparative state of rest or balance: and having the same surface exposed to the sun and wind for a long time, they at length saturate the particles of the soil exposed to their influence, and, consequently, at last excite little fermentation; when, however, the surface and clods of earth are disturbed by the harrow or plough, every part is freshly exposed to both sun and air; fermentation is strongly revived, and dryness rapidly ensues. A gardener whilst digging, always takes pains to break each spit of earth in pieces, both on the top and bottom of the trench; knowing from experience, that this extra labour and care will be amply compensated, by the proportioned superior produce of the next crop. When a soil is broken up by the plough and highly pulverized, this essential effect, *fermentation*, is gained; which cannot take place without the presence and consequent decomposition of air or water, or both; the constant interchange of the air, charged with moisture, ascending and descending through the pulverized soil by the influence of the interior fermentation, the day's heat and the night's chill, leaving behind a quantity of moisture sufficient to keep the soil damp, even in the driest seasons. The ploughman's experience satisfies him of this fact, but it is not discoverable in unmoved land, which is generally hard, dry, and full of cracks during the summer months. And when vegetable and animal manures are applied to the soil and buried by the plough, they undergo fermentation, and gases of various natures are evolved; these passing into the finely pulverized earth become arrested in their nascent state by the minute particles of the same, and are there strongly retained, so as to exhibit for a series of years afterwards their presence, by the superior crops that follow. Meat of all kinds is sweetened and made tender by being buried in the earth for a day or two, for the soil commences a digestive process, and imbibes and retains all the putrid effluvium as it generates. Dogs are, by their instinct aware of this, when they bury a bone; otherwise, from the acute smell of their own species in general, their store would be easily discovered, if the least effluvia escaped during that time, and the treasure be robbed; but such an occurrence is very rare. A portion of soil taken from a cultivated fallow, and compared with an equal quantity from an exhausted soil close adjoining, with wheat in the ear growing on it, exhibited this difference—the fallowed soil retained moisture longer; and when both were equally dried, the former regained moisture from the air quicker than the latter—a most important fact. Again, a thermometer was inserted three inches into a soil cultivated and pulverized a few hours before, and then plunged the same depth into the same soil close by, which had not been recently removed; and the result proved that the fresh mould raised the quicksilver at least two degrees higher than the unmoved earth.

The cultivation and pulverization of soils increase their powers of decomposition or fermentation, and this will ever be denoted by the proportioned increase of the growth of plants; likewise, by the more rapid decay of vegetable or animal substances contained therein; but vegetables *growing* in a soil, have the tendency to lower the temperature of the same, caused, it is conceived, partly by their shade and partly by their very act of growing, which, by transforming the more solid and liquid manures about their roots into a rarer or gaseous form, occasions the difference, from the consequent consumption of a portion of the surrounding heat taken up in a latent form during the rarefaction of

any of the above substances. It is also known, that fish manure when ploughed in, and worked repeatedly with the plough and harrow in fallowing, lasts longer than when simply ploughed under for the crop—a proof, that cultivation and pulverization strengthen the chemical powers of the soil. On the same principle, farm-yard manure will go further when worked into the soil, so as to become intimately mixed, before sowing the crop.—This satisfactory conclusion may therefore be drawn—that the particles composing a well-wrought soil, are capable of *mechanically* retaining and chemically *combining* with air and water and their principles; and also, with the various products from vegetable and animal manures: and this capability of the soil is to be improved, strengthened and perpetuated, by well directed cultivation—thus proving, not only the use, but the necessity and importance of thorough cultivation and pulverization by means of fallowing; the operations for which ought always to be commenced early in the autumn, and in dry weather; then the plough presents an entire fresh and partially dry surface to the influence of the succeeding winter, instead of the same which had been before long exposed during the preceding summer, and was in consequence become stale; therefore, the soil would not derive the proportion of benefit it ought to do from the ensuing winter's frosts and rains, and other changes, which, however, will be gained by the particles of the now fresh turned up surface. Again, the land being broken up as dry as it will plough, the surface not only presents a greater number of particles to immediate exposure, but being at the same time rather dry than otherwise, the winter's rain and snow enter more readily into every part of the clods, which, after the manner of lime, crumbles them to powder: whereas, if the same land be ploughed up wet, so as to knead, the cavities of the soil being already filled with water, like a sponge, can receive no more; and therefore, from the approaching winter, there is no chance to be again moved, or become dry: the fresh rains and snows which fall cannot penetrate through the clods, every interstice being already pre-occupied by the former moisture; and this same quantity, thus locked up, when it has imparted to the soil all that it is capable of, no further benefit is to be expected, except upon the mere surface, where the frosts and sun may occasion a partial dryness. Such land, when ploughed in the spring, will turn up cold, heavy and clammy, instead of being in the fine and tender state of that land which was ploughed dry in early autumn, and now again in a dry season. And if a person follows the plough at that time, and examines the land thus turned up, when the stubble and weeds were buried, he will see that in turning over, it separates readily into small portions, thus materially assisting in the commencement of pulverization; the stubble being found in a blackened and mouldy state, with the weeds quite decayed; and all this proceeding from the fermentation which ensued during the changes of winter, aided by the easy decomposible nature of the substances buried; whereas, if the weeds had been suffered to remain unmolested, they would have continued alive, and have grown, if the winter had proved mild.—*Bland's Principles of Agr.*

STRUCTURE OF THE FOOT OF THE HORSE.—The bones of the foot are not placed directly under the weight; if they were in an upright position, they would make a firm pillar, and every motion would cause a shock; but they are placed slanting or oblique, and are tied together by an elastic binding on their lower surfaces, so as to form springs as exact as those which we make of leather and steel for carriages. Then, the flatness of the hoof which stretches out on each side, and the frog coming down in the middle, between the quarters, adds greatly to the elasticity of the machine. But ignorant of this peculiarity of structure, ill-informed farriers nail the shoe in such a manner as to confine the quarters, and thus cause permanent contraction of the bones, ligaments and hoof, so that the elasticity is destroyed; every step is then a shock, and inflammation and lameness ensue. Mr. Bracey Clark has contrived an expanding shoe, which, by a joint in front, opens and contracts, so as to obviate the evils of the common process.—*Brougham.*

TO PRESERVE FLOWERS FRESH FOR A LONG PERIOD.—Procure a flat dish of porcelain; into which pour water sufficient to nearly fill it; in the water place a vase of flowers: over the vase place a bell-glass, with its rim in the water. This is similar to a "Ward's case," in principle, although different in construction. The air that surrounds the flowers being confined beneath the bell-glass, is constantly moist with the water that rises into it, in the form of vapour. As fast as the water becomes condensed, it runs down the sides of the bell-glass into the dish; and if means be taken to enclose the water on the *outside* of the bell-glass, so as to prevent its evaporating into the air of the sitting room, the atmosphere around the flowers will remain continually damp. This plan is designated the "Hopean apparatus." The experiment may be tried on a small scale, by inserting a tumbler over a rose bud, in a saucer of water.

Gardeners' Chronicle.

For the Farmers' Cabinet.

Fences.

Messrs. Editors,—As materials for fencing are becoming more scarce every year, in this part of the State, our farmers have been turning their attention for some time to the means of lessening the expenses which are continually occurring, to keep their farms in suitable repair. Our fences are either the worm, post-and-rail, or thorn. Unfortunately for us, the thorn has been attacked by insects, which have injured it exceedingly—in some instances it has been almost destroyed. The post-and-rail fence has now become very expensive, in consequence of the scarcity of white-oak timber—the best of which is purchased to be cut into scantling and ship stuff. The plan now coming into use for the worm fence, is to set it upon a good sized stone, elevated at least six inches from the ground, as heretofore.

The rails are first prepared in the following manner:—A measure—say of shingling lath, of the length of the rails, is procured, and holes bored about half an inch in diameter, and four inches from the ends; it is laid upon the rails, and holes bored in them corresponding with those in the measure. When a number of rails are so prepared by boring, and ready to be put into fence, an iron rod suitable to the holes so bored, is set upon the stone or block, on which the fence is to stand, and then the rails are to be inserted on the rod until the panel is completed. The rod is to be bent about one and a half inch at the stone, so that when the fence is completed, it may be clenched or bent over the bottom rail—the panel is secured by making a hitch with a chain or rope, over the joint, and then bending or clenching the iron rod on the top rail—some prefer driving a small wedge at the side of the rod, instead of clenching it, so that the fence might the more easily be removed, if at any time it should be found necessary. The most expeditious and convenient way for making such a fence, is for two persons to be engaged at it at the same time—one at each end of the rail boring the same simultaneously, and then assisting each other in placing it in the fence. A man can bore many hundred holes in a day, and the expense in preparing and setting up a panel, including the rod of iron, would not exceed the expense of preparing and setting up a panel of post-and-rail fence. A great advantage to the farmer in this method of using the iron rod is, that it holds the rails so completely firm at the joint, that no wind as yet, has been of such violence as to move it from the foundation—such a fence, made of good cedar or chesnut rails, will endure until it wears out with old age.

In the ordinary worm fence, each joint requires two stakes, which of cedar or chesnut, cost with us considerably more than the rod of iron. The oak post undressed, is worth about 15 cents—the two stakes for each joint of the fence, worth 12½ cents. Now counting all the expense of both kind of fences, I am well convinced that the iron rod fence is cheaper by 15 cents a panel than the post fence—besides, the posts rot out, and it will be necessary to obtain a new set every 12 or 15 years—and then there will be a loss of at least 10 per cent., in supplying the place of broken rails and resharpening them and others. The iron rod will cost about seven cents—for a five-rail fence, it should be cut about four feet nine inches. The lap of the rails need be no more than about four inches, and the worm about four feet—such a fence, with this worm, will stand the heaviest blows that we are accustomed to in this climate, especially if the rod be well clenched on the top rail. There may be a saving of one, or even two rails to the panel, in substituting blocks of wood cut short, and bored so as to suit the rod through which it is to be inserted.

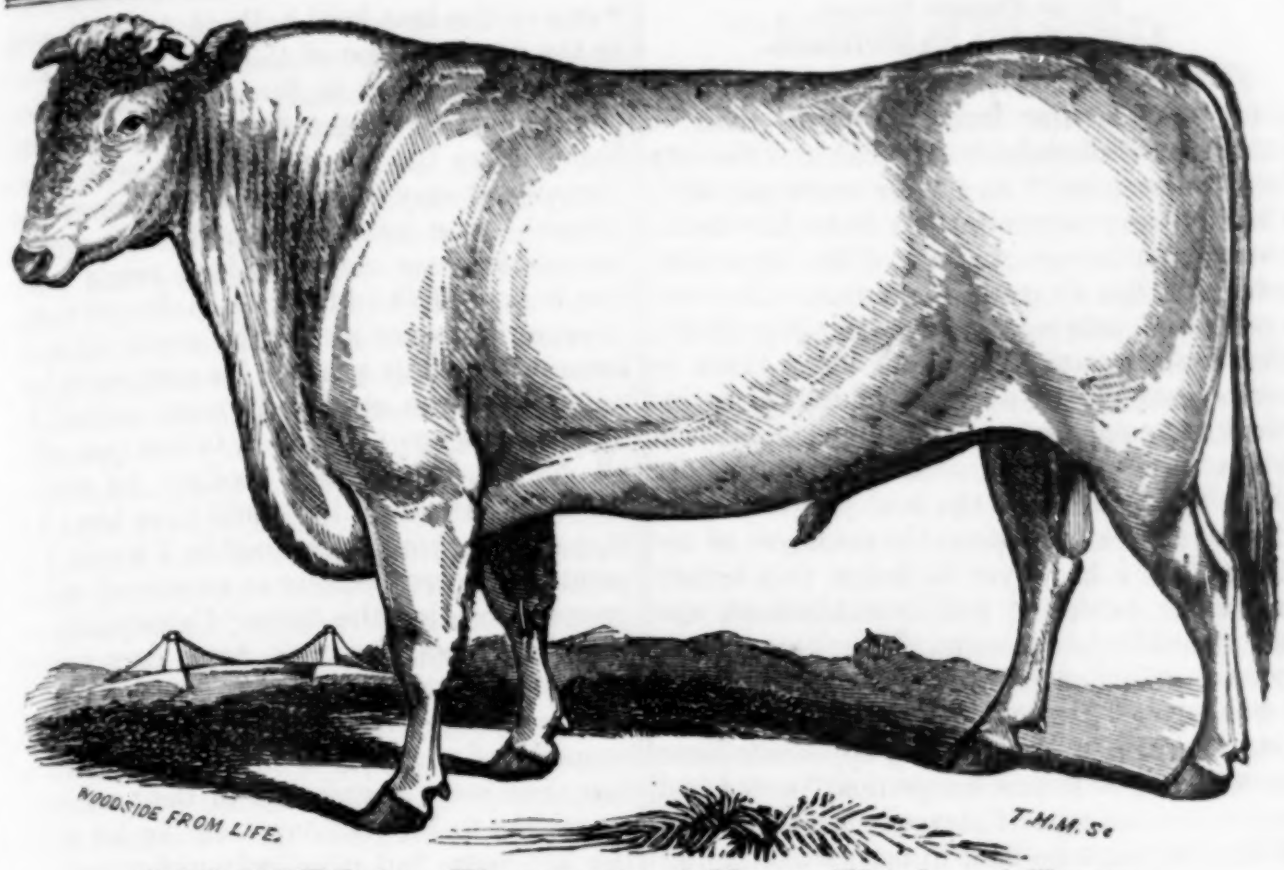
If the above communication may be considered worth inserting in the Cabinet, it is freely at your service.

An Old Farmer.

Salem County, N. J., Dec. 22nd, 1842.

New method of growing Asparagus.—The Editor of the Horticultural Magazine, recommends a trial of the following method of growing asparagus, which is practiced at Nice, and of which a high account is given in the London Gardeners' Chronicle. Take a quart wine bottle; invert it over the head of a stalk of asparagus just rising from the ground, and secure it by three sticks so that it cannot be knocked over. If left in this state, the asparagus will grow up into the interior of the bottle, and, being stimulated by the unusual heat and moisture it is then exposed to, will speedily fill it. As soon as this has taken place, the bottle must be broken, and the asparagus removed, when it will be found to have formed a thick head of tender delicate shoots, all eatable, and as compact as a cauliflower.

To Destroy Ants.—Mix an ounce of powdered arsenic with a quart of water, boil it half an hour with some sugar, and place the syrup in small shallow vessels—oyster-shells will do—in places infested by them. The sweetness attracts them, and the consequences are speedily fatal.



COLOSTRA;—*The property of Messrs. Wright and Turner.*

Colostra by Colossus, (1847)—dam, Miss Fairfax, by Fairfax, (1023,) g. d. Lily, by young Warlaby, (2812) gr. g. d. by young Dimple, (971) gr. gr. g. d. by Snowball, (2648.), &c.

THIS noble animal, perhaps better known by repute than any other improved short-horn in the United States, is of the purest white, with a silkiness of hair remarkable, through which, the peculiar fleshy colour of the skin is very perceptible. His docility is remarkable, and his appearance majestic. Our engraving is from a painting by Woodside, from life; which, with all who know that talented artist, will confer a value upon it, worth more than the amount of our subscription for the year. COLOSTRA was purchased at the sale of Mr. Whittaker's imported stock at Powelton, by Mr. C. Wolbert, in whose possession he remained for about four years, obtaining the name, "Unrivalled," and an offer of $2,800 for his purchase; he is now seven years old, in perfect health and full vigor, and a sight of him would repay the expense of a journey of a hundred miles, to any one engaged in rearing improved short-horned stock.

It may not, perhaps, be out of place here, to state a few particulars relating to the first introduction of this favourite breed of cattle, which are gleaned from Youatt's work on "Cattle, their breeds, management and diseases," published by Grigg & Elliott, No. 9 N. Fourth street, Philadelphia, and which ought to be in the hands of every stock breeder in the Union. It is said, "Mr. C. Colling, sensible of the difficulty of breeding with certainty, *large, good animals*, formed a resolution to reduce the size of the Teeswater, and by that means to improve its form: this he did through the medium of a bull called HUBBACK, an animal, respecting which there has been much controversy; at the same time, we have no superior short-horns which do not claim descent from him. The possessor of the dam of HUBBACK, was a person of indigent circumstances, who grazed his cow in the highways; the calf drew the attention of a person by the name of Waistell; but as the owner asked 8£ sterling for him when less than a year old, the bargain was not struck; but one day, happening to meet Mr. R. Colling, he asked his opinion of him, and was answered, that he considered 'there were some good points about him.' There was something in his manner of saying this, which induced Mr. Waistell to suspect Mr. Colling thought highly of the calf; he therefore hasted the next morning, and concluded the bargain; but had scarcely done so, when Mr. Colling arrived for the same purpose! And as the two rode home together, they agreed that it should be a joint speculation.

"In the end, the little animal was transferred to Mr. C. Colling, who, with a quick eye, saw his value, and left Mr. Waistell to regret ever after, his having parted with him; for Mr. C. would never allow him to serve, even one of Mr. W.'s cows, but kept him exclusively for his own stock. The quality of his flesh, hide and hair, are supposed to have been seldom equalled; and as he was smaller than the Teeswater, he was eminently qualified to further Mr. C.'s views. He was the sire of the dam of the bull FOLJAMBE, who was the grandsire of FAVOURITE, from whom every superior short-horn for many years, traced back its descent. FAVOURITE was the sire, by a common cow, of the famous Durham ox, which travelled on exhibition for six years, his owner refusing £2000 sterling for him. His live weight was 3,400lbs., which did not arise so much from size, but peculiar formation; for he was, comparatively, not a large ox."

For the Farmers' Cabinet.

Agricultural Exhibitions.

Messrs. Editors,—If I know myself, nothing was farther from my wish, than to bring the Philadelphia Agricultural Society into "disrepute;" and your correspondent, Culley, was never farther from the truth, than when he accuses me of the intention; which he has altogether mistaken. It is the system of judging and awarding publicly, that I am opposed to; and I cited cases to corroborate my views, without regard to individuals composing examining committees. I am quite ready to admit, that amongst them are to be found the best judges of cattle and the most respectable members of society; but I have yet to learn, that either judges or cattle, at public exhibitions, are not amenable to criticism. Your correspondent is unfortunate in *accusing* me of being "wonderfully pleased with some things;" for he afterwards says, "nothing appears to have been managed to suit his genius;" now I had just expressed myself pleased with the award of the judges, who had, in my estimation, at length done justice to the Prince of Wales; and I point to this circumstance, to show your correspondent that he is again wrong, when he "*honestly*" believes I do not know a good animal when I see one; for here are the judges, "unanimous in their opinion," declaring that I *do* know a good animal when I see one. I suppose I must submit to the punishment of finding myself exposed to ridicule amongst judges of thorough-bred Durham short-horns, for having dared to find any fault with Colostra; and yet, the appointed judges have declared *unanimously*, that his qualities are second rate! If I had wanted coarse beef, I should have known where to go for it; but what I did want, I found in the beautifully-formed rump and buttocks of Mr. Kelly's bull, Prince of Wales; and must again express surprise, that the comparison had not long ago been made by the judges, to his advantage. I again ask, fearlessly, is Colostra worse, or the Prince of Wales better, than they were a year ago? I will also again *presume* to ask, if Leander is at all *improved* since the time when he was declared inferior to Sam Slick; that is, at one year old? I believe not, for at that time he was declared to be a *perfect animal*, by his spirited breeder, than whose judgment in stock, I know of none that I would this day prefer. "But Sam Slick was not this year on the ground;"—true, and I was therefore deprived of the opportunity of ascertaining, whether, in the estimate of the judges, he still retained his superiority over Leander—and would this have been too much to calculate upon, seeing that he is "one of the best bred bulls in America, and in the hands of one of the best breeders and managers of stock in the country?" besides having carried off the first premium, as the best bull on the ground, the last year. But Leander, it may be said, was not then on the ground—true again; but if I were such a person as your correspondent would have you believe, I should not be backward in expressing the opinion, that he would not have been present this year, if his antagonist had not quitted the stage. It must, indeed, be discouraging to a breeder, to find that after all his care and high feeding, he cannot *make* an animal all he would have him; but that such a thing is impossible, I would just point your correspondent to an animal on the ground, boasting the name "Colostra the second," as proof, that "all breed does not go in at the mouth."

Your correspondent must be high in the councils of the judges to know, of a truth, that they were unanimous in their award of premiums to Judge Longstreth for his stock the last year; but peculiarly unfortunate, in ascribing the loss of them to the removal of his cattle from off the ground, *by mistake*; for I would ask, if there was a single exhibitor present, who did not *know* that it was one of the rules of the Society—oft exprest and published—that "all stock must remain on the ground during the days of exhibition?" And doubly galling to the Judge must it have been, thus to be deprived of the honour, through an inadvertency on his part; seeing that the owner of Leander, the year before, received his second premium, (see p. 141, Vol. V. of Cabinet,) although he caused him to be removed from the ground immediately on the publication of the award, declaring that he considered his bull *disgraced* by it, and indulging in ummeasured terms, his opinion of the incapacity and ignorance—not to say prejudice—of the judges! thus breaking through the rules of the Society—himself being one of the framers of these rules—and setting them at open defiance. Now if the owner of Leander—a man in whose judgment I am willing to place as much confidence as in that of any other member of the Society, considers the system so inconsistent and unsatisfactory, I hope I may presume to take shelter by his side, and propose, *respectfully*, that the Society would amend it—which is all that I ever presumed to do.

Your correspondent's charge, of vilifying the individual characters of the judges, I value not—I feel it is unmerited, and that's enough, without retaliation or complaint. Perhaps I know most of them as well as he does; and there are some amongst them,

whom I know I value, more than he *can;* but this only goes to prove the fallacy of the system which I am combating; for we find that although they are "men selected from the country round; chosen on account of their long experience; honest men of good judgment, and not afraid to exercise it; and whose characters for veracity, will never suffer from the insinuations of Z;" yet they are sure to disappoint the hopes of unsuccessful candidates; who, then, as we have seen, are too apt to feel themselves at liberty to impugn their motives and criticise their qualifications most unsparingly, although *they* have not the slightest right to the expression of such feelings; for having committed their cause to their hands, they are bound to submit to their decision, be that what it may. So that, as much for the sake of the judges as for the competitors, I am very desirous of seeing the present system of public awards, everywhere done away; and return my thanks to your correspondent for the honour he has done me, in considering my plan "worthy of me;" which, I assure him, is all that I aspire to. I conclude in the words of another—

"Observation and comment are unavoidable, wherever there are eyes to see and hearts to feel. An honest man will not fear investigation; if he is not sure of his opinions, he will say so, and endeavour to gain more light; but if he is convinced, he will speak them, and be ready to avow them. There are men who have found persecution and violence more endurable than concealment of their convictions." Z.

P. S. Your correspondent has done me injustice—I hope unintentionally—in making me say, there were cattle, on which the Society had heretofore lavished their premiums, *in the most extravagant manner.* I said no such thing. That premiums had been lavishly bestowed on certain animals present, no one will deny; it was saying, the Society had been *lavish in their praise;* a term often used, without the obnoxious meaning appended to it by your correspondent.

Book Farming.—Show me a thrifty, practical and experimental farmer, and I will show you a man who reads works on Agriculture, or who borrows his hints from a neighbour who takes Agricultural papers.

Show me a farmer whose fences are going to decay—whose half starved cattle are strolling over a brush field—and I will show you a man, who, if he is not on a retrograde track, takes too little interest in agriculture to patronize an agricultural paper.

Cultivation of the Currant.

Very few of our garden fruits are so much neglected as the currant. Its cultivation seems to be in many instances, a matter of no consideration; and when the bushes are once planted, they are left to take their chance, and little attention is bestowed upon them afterwards. Pruning is entirely forgotten, and the plants often become a prey to insects, which soon destroy them. A fruit so generally admired for its good qualities and its many excellent uses, and so universally cultivated, that scarcely a garden exists in which it may not be found, should not be so entirely neglected; for, like all other fruits and plants, it is susceptible of improvement; and had the same attention been given to it that has been lavished upon the gooseberry, we doubt not but that new varieties, far excelling any we now possess, would have been found in our gardens, as common as the new and improved sorts of that fruit.

In France the currant has long attracted attention, and, until lately, has been much more highly esteemed than the gooseberry. But the French horticulturists did not attempt any improvement in the varieties. The Dutch cultivators were the first who seem to have paid particular attention to it; they succeeded in giving a greater value to this fruit by the production of seedlings, and it is from this source that the very best varieties at present known, have been spread over Europe and America.

The late Thomas Andrew Knight, Esq., President of the London Horticultural Society, called the attention of cultivators to the currant, and he attempted the production of new varieties from seed: a paper on the subject was read by him before the London Horticultural Society, and subsequently published in their *Transactions.* Three of Mr. Knight's seedlings are at the present time found in the English catalogues. Mr. Knight, in a letter written but a short period before his death, lamented that the improvers of the gooseberry did not, in preference, select the red currant. Reasoning from his extensive experience in the cultivation of fruits, he believed that fruits which, in their unimproved state, are acid, first become sweet and then insipid, by improved cultivation, and through successive varieties. To this he attributes the excellence of the gooseberry, which he believed had been shown in nearly its greatest perfection, in the climate of England. The currant, he thought, might eventually become a very sweet fruit.

It is well known that the accidental cir-

cumstances of soil, situation, &c., in which the currant has been grown, have been the means of so altering the appearance and character of the fruit, that new names have been given to such as have been found in a superior state of growth, and some of the sorts are known under at least half a dozen synonymous terms. We have known individuals who have cultivated the currant many years, who, upon seeing those of superior growth, have inquired the name of the variety, under the impression that they might add a larger and a better sort to their garden: yet how surprised have they been to learn, that it was one and the same kind of which they had abundance already, only in an inferior and neglected state of growth. It is indeed a rare circumstance to find plants in any thing like the vigor they can be made to attain by proper cultivation, the application of manure, and above all, the proper mode of pruning.

It is to the cultivation of the well known and excellent varieties of the currant which we already possess, that we wish to call the attention of cultivators. If their mode of treatment be properly understood, it may be applied to any improved varieties which may hereafter take the place of those that are now known.

Raising the currant from seed.—To grow seedlings, it is important that the largest and best fruit should be selected. To do this, a strong and healthy plant should be taken, and if too full of fruit to prevent its attaining a good size, it should be thinned out, leaving only sufficient for the plant to bring to the utmost perfection; as soon as the fruit is ripe, it should be picked, and the seeds washed out from the pulp: this may be easily done by bruising the seeds in water, and passing the whole through a sieve, and afterwards spreading it out in a cool, shady, situation to dry, after which it may be placed in papers until the time of planting in the month of April. At that season a small piece of ground should be selected for the purpose, and be made fine by deep spading and raking the surface; the seed may then be planted in drills about a foot apart, scattering it thinly, that the plants may not come up so crowded as to require thinning out to any extent. No other care is requisite than to keep the bed clear of weeds: they will produce fruit in the second or third year, when such as are worth preserving should be marked, and the remainder rooted up and thrown away.

Soil.—The currant is perfectly hardy, and will grow in any situation, and in almost any good garden soil; but that in which they produce their fruit in the greatest perfection, is a deep, rich, mellow loam, somewhat moist; very stiff clayey soils are the least adapted to this fruit. In sandy soils the fruit is earlier; but the crop is small, and soon gone. When it is the object to produce very superior fruit, the soil should be staked out, and then covered with three or four inches of good old decomposed manure. It should then be trenched 18 or 20 inches deep, placing the top spit and the manure at the bottom of the trench. When the bed is settled, a little manure may be dug into the surface, and it will then be ready for planting.

Raising young plants.—Cultivators who wish to make large plantations, and are desirous of raising their own plants, can easily do so. The cuttings should be planted out in April, just as the buds begin to push, selecting a shady border, and planting them five or six inches apart; the cuttings should be about a foot long, of the preceding year's wood, healthy and vigorous, and cut off directly below a joint. If the bushes are to be grown in the manner of small trees, with one main stem, all the eyes should be cut out but the two top ones. Planted out in this manner, they make pretty plants, which may be removed to the fruiting beds the following year.

Planting out.—The period for planting out, is any time after the fall of the leaf in autumn until severe frost, and early in spring before the buds have pushed so far as to show their flower buds. In dry situations, October is probably as favourable a season as can be selected, as the plants start into leaf very early in the spring, often before the cultivator thinks it time to plant out, and a season is lost; but if the ground is inclined to be wet in winter, the early part of April is the best season. The modes of planting are various, some preferring to place them on the borders of walks, and others in beds by themselves; we think the best plan is, when many plants are wanted, to set apart a small piece of ground for their exclusive growth; but whatever situation is chosen, prepare the soil as above directed. The proper distance at which plants should be set, is six feet apart between the rows, and four feet from plant to plant: less distances than these will do, but the chances of procuring large fruit will be less. To plant neatly, a line should be stretched across the bed: at the proper distances put down a small stake, then commence taking out the earth: now place in the plant, setting it against the line; spread out the roots carefully, and cover them with fine earth, making it firm around the roots, and treading it lightly when finished; give each plant a pot of water, if dry weather at the time of planting.

Keep the surface of the soil loose and clear from weeds, by occasional hoeings during the summer.

Pruning.—Next to a good rich soil, pruning is the most important thing to be attended to; neglect in this respect, will be sure to cause disappointment to the cultivator who expects large and fine fruit. The branches will shoot up thick and weakly,* and, if not attended to, and the superfluous ones cut out, the bush will be so crowded as to produce only a quantity of half formed clusters, with a few small berries.

It is known to many cultivators, though perhaps not to all, that the currant bears its fruit both upon the young wood of last year's growth, upon that of the second and third year, and also upon the little spurs which spring from the older shoots; but it is only upon the young and vigorous wood of the preceding year, that fruit of superior size and beauty is obtained.

Insects.—The currant has but few enemies in the insect tribe; the most injurious is the borer, (*Ægeria tipuliformis,*) which eats its way up the centre of the stems, causing great debility, and eventually nearly destroying the plants, or at least incapacitating them from producing any thing but very small and poor fruit: the bushes are also in danger of being broken by light winds or with heavy crops of fruit. The best preventive for this insect is to keep the plants in a vigorous state, and well supplied with strong young wood, as it is only in the older branches that the borer commences its ravages. When they once take possession of the bushes, cut out all the old shoots, especially such as are in any way decayed, and encourage only strong new wood: the *aphides*, or plant lice, occasionally infest the leaves, but these may be easily destroyed by one or two washings of whale oil soap.—*Mag. of Hort.*

A JOURNAL of Bruges seriously announces that the Belgian pigeons are threatened by the directors of the French post-office. Regular communications between Paris, London, Brussels, Antwerp, Ghent, Bruges, and other cities, by means of pigeons, are now established, and some of these aerial couriers are daily despatched in different directions after the closing of the Exchange. They state that the French post-office authorities intend to prosecute these pigeons as the bearers of letters, contrary to the law which gives to the post-office the monopoly of the conveyance of letters less than one kilogramme, (2lbs.) in weight.

* That is, if they are suffered to grow in bunches, instead of one main stem, like a small tree.

For the Farmers' Cabinet.

Farm Leases.

THE Cabinet for October contains an excellent paper on the "Improvement of Agriculture"—"all true, depend upon it." The only wonder is, that any *improvement* should ever be made or even thought of, without the security of a lease; and yet, how often do we hear land owners complain of the difficulty they find in obtaining a tenant that will do justice to their farms, while they themselves are helping to skin the land, and pocketing one half the ill-gotten gains, without the least compunction of conscience. But in this chapter of misdeeds there are redeeming clauses; I know of some who no longer inquire of their tenants, "how much manure *must* they have?" but "how much *will* they have?" having discovered, that in just the proportion in which the land and the tenant are benefited, so are they themselves advantaged, even in a pecuniary point of view; after which, the satisfaction of beholding the smiles of both, is above all price. Allow me to add a few more extracts, corroborative of the article above alluded to, and to subscribe myself thy friend, S. B.

New Jersey, 28th of Eleventh mo., 1842.

"In Scotland, the leases are generally restricted to nineteen years. The tenant is now left at liberty to treat his ground as he may think fit during the earlier part of his lease, so as to give full scope to the employment of his capital, his industry and skill: being, towards the closing years of his occupancy, bound merely to such a system as may prevent him from scourging the ground; so as to protect the interests of the proprietor. The result of this system is seen in the more judicious arrangement of rotation of crops; in the spread of science, and the application of the skill of the mechanic; in the improvement of the implements of agriculture; in the extensive outlay made by the tenant in draining, &c., and the management of fertilizing manures. On the other hand, we need not look far abroad to perceive where the landlord *cannot* and the tenant *dare* not, expend money in fertilizing the land held from year to year; to note, where the owner's absence, ignorance or extravagance, chills the efforts of tenants in the work of improvement; 'where the good old landlord' has been succeeded by the stranger spendthrift, and the tenant's improvements have been made to minister to his extravagance; where the speculating purchaser has made his investment a good one, at the expense of those farmers whose liberality best deserved his praise; where

the loss of the husband has brought a loss of all, and the stranger has gathered the harvest that should have been reaped by the children. No—these are cases which require not to be particularized; for, when felt or seen, no other evidence is needed to teach us that there requires a change; for one such example is sufficient to put a stop to the improvements, and to draw the purse-strings of a thousand tenants-at-will. For one bad farmer upon a long lease, we shall find ninety-nine who are superior to their neighbours, who are tenants from year to year; and it is only by comparing the two, that we see the operation of each principle. Often, when a farmer has his farm on lease, in a district where they are uncommon, when his management is commended, it is urged, Oh, he has a lease; his farm is like his own, and he can do as he pleases."

In conclusion, take the estimate and sentiments of the Earl of Ducie, as expressed at a meeting of the Gloucester Farmers' Club:—"My opinion is, that until the question of leasing is fairly and clearly understood, all efforts after improvement will fall short of what they ought to be. For myself, I can say I never wish to see any man enter upon a farm without a lease; but in return, I must have intelligence: I would not grant a lease to the man, who, because his father and his grandfather did so and so, refuses to change his system; but to a man of intelligence, I would give the most liberal encouragement. I would regard that tenant as a blockhead, who would sink money without the protection of a lease; because, however much confidence he might have in his landlord, he has no security for similar treatment, in the event of a son or trustee becoming the manager. In my estimation, no man is justified in expending money in improvements, unless the value is secured to him and to his children after him, by lease."

The following is mentioned in the local papers, as one of the most remarkable instances of the rapidity of steam navigation. The Royal Mail steamer, Columbia, sailed from Liverpool on the evening of the 19th of July, and arrived at Boston on the morning of the 1st of August. The Acadia left Boston on the afternoon of the 1st, and reached the Mersey in the forenoon of the 13th of August, bringing replies to letters dated Liverpool, July 19th. The interval between sending the letters and receiving the replies to them, was a few hours more than 24 days! This is the most rapid conveyance of letters between the Old and New world ever known.

For the Farmers' Cabinet.

Ploughing Match at Port Penn.

"Honour to whom honour."

Mr. Editor,—I was so well pleased with the working of the centre-draught and subsoil ploughs in planting my potatoes, that I immediately determined to place at the disposal of the committee of St. George's Agricultural Society, a valuable bull-calf of the Durham breed, a prize to be contended for, at the ploughing match of the quarterly meeting of the Society at Port Penn; and accordingly, the following notice was issued. The account of the result was drawn up immediately after the trial, for insertion in the Cabinet, but has been mislaid until now.

John Jones.

October 27th, 1842.

"*To Machinists, Agriculturists, &c.*

"A premium of the bull-calf, St. George, out of Cecilia, by the bull, R. M. Johnson, will be awarded to any member of the St. George's Agricultural Society, or any other Society in Delaware, or elsewhere, who will bring on the ground, a plough, or ploughs, that may perform the best work, on land to be selected at, or near Port Penn, by the President and late President of the St. George's Society, who are the committee to attend in the case. All who are friendly to the success of the plough, are invited and requested to contend for the honour of producing and using that most useful implement known to man, as well as the valuable prize here offered."

In accordance with the above notice, a meeting took place at Port Penn on the 14th of May, under the auspices of the St. George's and Appoquinimink Agricultural Society, when four ploughs started for trial, viz:—

1. Miles's large plough, owned by John Barney, President of the Society; ploughman, a coloured man in his employ.
2. The Wiley plough, owned by R. Mc Coy; his son, a lad of 15 years, to guide; with his father's team.
3. Beech's Concave, owned by Levi Ryan; D. Stewart, ploughman, with his own horses.
4. Prouty's Centre-draught, owned by John Jones; ploughman, R. Carter, from Yorkshire, England.

Each of the ploughmen entered on their separate lands, and performed their work well; the boy, for his age, doing extraordinary work: but the land ploughed by the centre-draught plough was the best done that I ever saw; notwithstanding the ploughman had just arrived from sea; the land, the plough, the team, and the numerous lookers

on, being all strange to him. The land—measured off by himself—was ploughed hither-about; and so neat and true was the work performed, that if a line had been stretched across from the double furrow, and including it, there could not have been a variation of two inches, either in the width of the furrow, or height thrown, including also the clearing furrow, which was the best done in the whole; for so straight was the sod laid and evenly gauged, that the open furrow was just the width of the share and bar, or side of the plough, and no more; and most elegantly finished. Notwithstanding all this, the judges, John Barney, Peterson Reading, and B. Caulk, Esqrs., gave the award to Levi Ryan, the owner of the Concave plough; alleging, that if the work had been done by the Englishman, (the holder of the Prouty plough) it would have been *better performed!* a strange award indeed.

JOHN JONES.

Wheatland, Delaware, May 27th, 1842.

NOTE.—Mr. Ryan never demanded the bull-calf. Whether it was that he considered it honour sufficient to have obtained the award, or from a feeling that he had not conquered, is not said: the animal, now a fine grown beast, will be again submitted for competition.

The Honey Bee, and the Ant.

WE have seen how wonderfully the Bee works according to rules discovered by man, thousands of years after the insect had been following them with perfect accuracy: but the same little animal seems to be acquainted with principles of which we are still ignorant. We can, by crossing, vary the forms of cattle with astonishing nicety, but we have no means of altering the nature of an animal, once born, by means of treatment and feeding; this power is, however, undeniably possessed by the bees, for when the queen-bee is lost by death or otherwise, they choose a grub from amongst those which are born for workers, make three cells into one, and placing the grub there, they build a tube around it, and afterwards build another cell of a pyramidal form, into which the grub grows; they then feed it with peculiar food, and tend it with extreme care, and it becomes, when transformed from the worm to the fly, not a *worker*, but a queen-bee. These singular insects resemble our own species in one of our worst propensities—the disposition to war, but their attention to their sovereign is equally extraordinary, although of a somewhat capricious kind. In a few hours after their queen is lost, the whole hive is in a state of utter confusion; a singular humming is heard, and the bees are seen moving all over the surface of the combs with great rapidity; the news spread quickly, and when the queen is restored, quiet immediately succeeds; but if another queen is put upon them, they instantly discover the trick, and surrounding her, they either suffocate or starve her to death. This happens if the false queen is introduced within a few hours after the first is lost or removed; but if twenty-four hours have elapsed, they will receive any queen, and obey her.

But the labours and policy of the *ants*, when closely examined, are still more wonderful, perhaps, than those of the bees. Their nest is a city consisting of dwelling-places, halls, streets and squares, into which the streets open; the food they principally like, is the honey which comes from another insect found in their neighbourhood, and which they, generally speaking, bring home from day to day as they want it; late discoveries have shown that they do not eat grain, but live almost entirely on animal food and this honey. Some kinds of ants have the foresight to bring home the insects on whose honey they feed, and keep them in particular cells, where they guard them to prevent their escape, and feed them with proper vegetable matter, which they do not eat themselves; nay, they obtain the eggs of these insects and superintend their hatching, and then rear the young insect until it becomes capable of supplying the desired honey; sometimes removing them to the strongest parts of their nest, where there are cells apparently fortified for protecting them from invasion; and in these cells the insects are kept, to supply the wants of the ants which compose the population of the city. And it is a most singular circumstance in the economy of nature, that the degree of cold at which the ant becomes torpid, is also that at which this insect falls into the same state: this being considerably below the freezing point, they require food the greater part of the winter, and if the insects on which they depend for food, were not kept alive during the cold in which the ants can move about, the latter would be without the means of subsistence.

How trifling soever this little animal may appear in one climate, there are few more formidable creatures than the ant of some tropical countries. A French traveller has described one of their cities, and were not the account confirmed by various testimonies, it might seem exaggerated. He observed at a great distance, what seemed a lofty structure, and was informed by his guide that it consisted of an ant-hill, which could not be approached without danger of being devoured! Its height was from 15 to 20 feet, and its base was 30 or 40 feet square, its sides

inclining like the lower part of a pyramid, with the point cut off. He was informed, that it became necessary to destroy these nests, by raising a sufficient force to dig a trench all round and fill it with faggots which are afterwards set on fire, and then battering with cannon from a distance, to drive the insects out and make them run into the flames. These facts, respecting the ant and the bee, may be relied on as authentic; they are the result of very late observations and experiments, made with great accuracy by several most worthy and intelligent men.

Brougham.

The species of ant, *formica saccharivora*, which once appeared in such torrents in the Island of Granada, and destroyed the sugar canes so completely, by undermining their roots, that a reward of twenty thousand pounds sterling was offered to any one who should discover an effectual mode of destroying them, descended the hills in a *flood*, and filled not only the plantations, but the roads for miles. Domestic quadrupeds perished, and rats, mice and reptiles were destroyed by them; and corn birds were so harassed when they alighted on the ground, as quickly to die. Nothing opposed their march; they blindly rushed into the streams, and were drowned in such countless millions, that the aggregation of their tiny carcasses jammed up the waters, and formed a bridge for others to pass over. The large fires lighted in their paths were speedily extinguished by the rush of the masses, and had not Providence swept them away on the torrents of a terrible hurricane in 1780, every thing must have fallen before them.—*Intro. to Ento. Vol.* 1.

If husbandry is made respectable, as it ought to be, it will serve to check one of the greatest evils that bears now heavily upon the community,—the rush of our young men into the learned professions, which are already filled to overflowing, especially that of the law, which, under the present wretched course of legislation, of making litigation cheap, is starving this once honourable and most useful profession.

In agriculture, it was once the practice to take ancient customs as an infallible guide; nothing was then doubted, nothing investigated, and consequently nothing improved. Now, it is the principle to do nothing without a reason,—every thing, therefore, is investigated, and consequently, every thing is improved.

A good temper, a good library, good health, and a good wife, are four choice blessings.

For the Farmers' Cabinet.

Germantown Cow.

To the Editors,—Although not a farmer, yet, owning a four acre lot of ground, which I cultivate with much pleasure, I read with great interest, your valuable publication, and note the various discussions and communications on the different breeds of cattle; and with my limited means of judgment,—being a merchant, have arrived at the conclusion that, for dairy purposes, we possess in this country, breeds which are far superior, if care were properly bestowed upon them, to any that have been imported. Some years since, my highly respected neighbor, John Wistar, Esq., of Germantown, purchased a cow for twenty-five dollars, which I think came from Lehigh or Bucks county. Certainly not much further, and which never gave more than 15 quarts of milk per day, and yet made 4 pounds of butter in 3½ milkings, or equal to 16 lbs. butter per week. And this she would always do when fresh. Her feed was good pasture, and 8 quarts of ship stuff per day. It is to be regretted that a whole week's gathering of her cream was not churned at one time, or rather the entire produce of a week made into butter. This famous cow is dead; but her owner has one of her calves which made this autumn, 3 lbs. 2 oz. of butter from 3½ milkings. Now, taking into view cost and keeping, where are there any Durham cows which will equal these?

Whilst furnishing this communication for the Cabinet, I wish I could properly describe to those who have to spend their days in the perplexing toils of merchandize, where care and anxiety, far outweigh the labor, the pure pleasure and gratification which are derived from the cultivation of a four acre lot of land, which they can easily possess near the city. It is true, a man must rise somewhat earlier in the morning, and encounter a little more fatigue of body; for all which, he is amply repaid by improved health, and the withdrawal of the mind for a short period at least, from banks and banking, cloth, and cotton, &c., to say nothing of the ruddy cheeks of the children, the pleasant fireside of evenings, no "exchange," or "Wistar party,"—to tempt him abroad,—or, of the delights of summer, when the air is redolent of sweets, as well as vocal with the songs of birds. And then the interest he takes in having his *heavy crop* of 2 acres of grass mowed and made,—his sugar beets well cleaned from weeds—his corn ploughed, &c., will afford a delightful as well as useful and rational amusement.

C.

Dec. 20. 1842.

For the Farmers' Cabinet.

The Ruta-baga Turnip.

Mr. Editor,—In the "Massachusett's Ploughman," a correspondent is inquiring the cause of so many "sneers at the business of raising the ruta-baga turnip; a great many at the present day despising the root, who once thought it nice." In the course of his observations, he gives it as his opinion that the crop has become deteriorated by being grown, side by side, with the French and English turnips and cabbages; they having long stems, large spreading roots and spongy insides, and not keeping well in the winter; and then he goes on to say, that "corn is found to mix when grown together." Now, if the several sorts of turnip, cabbage and ruta-baga, are grown together, and the seed from either kind be reserved and sown, there would be no question that the produce would exhibit a woful "mixing," indeed; but if they are merely grown together, and not permitted to seed, I should have no fear of their *mixing*, let them be as closely set as you please. But herein is the chief cause of the complaint against both the ruta-baga and the sugar-beet—the land on which they are grown, is not sufficiently *cultivated* before the seed is sown; it should be repeatedly ploughed and harrowed, and rolled, with a view first to exhaust the land of weeds, by turning down every crop so soon as it appears above ground; and next, to spread a fresh surface of soil to the atmosphere as often as possible, by which the land becomes *sweetened*, as well as pulverized to a great depth; and into this well pulverized soil the plants send their tap roots, where, finding nutriment suitable for their growth, they are not induced to throw out those strong lateral roots, so often complained of, but, relying upon the small fibres which shoot forth from the sides of the bulb for a supply of *food*, collected near the surface of the land, they depend upon the single tap root for *water*, from below, which, being supplied in purity and plenty, the bulb grows to perfection; its juices, properly elaborated, concocted and matured, *circulate*, instead of becoming stagnant; and therefore, the plant remains healthy, affording no food for the blight, or living animalculæ, which are sure to infest the crop so soon as its juices become putrid, from whatever cause that might arise, but which is most generally attributable to an unwholesome and sour subsoil; for which, however, the subsoil plough is destined to become a *renovator* indeed. With such cultivation, the ruta-baga will be found to be no longer spongy and fork-rooted, but to keep perfectly sweet and sound through the winter and late spring. And to this superior cultivation, is, no doubt, attributable the fact, that the largest class of cattle in England, are fattened for the market by the turnip and hay alone; the culture of their root crops being attended to with the greatest care and success; forming the first crop in their admirable rotation, namely; turnips, barley, or oats, clover, wheat; by which their lands are kept clean, and go on improving for ages. The land designed for turnips, is ploughed deep in the fall of the year, and laid dry by means of cross-furrows, for carrying away the winter rains; it is run back in early spring, and when dry and fit for working, it is harrowed and rolled, and cleared from root weeds, and suffered again to rest, to produce another crop of weeds; these are again turned in, and the land is again well worked; and when the weeds again appear, they are again smothered, and the land again well pulverized. All this is performed by about midsummer, when the crop of turnips is sown, after the land has been well manured with compost, collected during the winter, and pulverized by turning in the spring; this being ploughed in by a shallow and very narrow furrow, the seeds are covered by a single light harrowing. It is very customary to sow the turnip crop broad-cast; and a single hand-hoeing is usually found sufficient to keep them clean, after five ploughings and the effectual destruction of as many crops of weeds. This is the universal practice throughout the turnip districts of England, where the system of cleaning the land while no crop is growing on it to form an obstruction to their labours, has long been found to be the most economical, as well as the most effective; the *quality* of the crop being in proportion to the labour bestowed upon it in cultivation.

Since writing the above, my attention has been turned to an account of the management of a field that had become impoverished and choked with weeds, which is worthy the notice of those of your readers who might have lands in the same condition; it is contained at pages 271–2, of the third volume of the Cabinet; and as some of our friends may not be in possession of that volume, I have transcribed it for reinsertion, if it meet your approbation; for I believe it is on a subject which is becoming of growing interest to all who are engaged in the cultivation of the soil; and particularly at this time, when the differences of opinion with regard to the value of root crops as cattle feed, are indeed about as distant as "light from darkness."

Vir.

Dec. 29th, 1842.

"The field was an oat stubble—it was ploughed deep and sown with rye in the autumn, when the weeds sprang up with the crop, so as to cover the land like a carpet; but this being fed off by sheep in the spring, they had no time to come to maturity. So soon as the land was cleared by the sheep, it was ploughed, harrowed and rolled, and the weeds were gathered and burnt on the surface; it was then suffered to lie, when the seed weeds sprang up by tens of thousands, but these were smothered at a blow, by being turned down by the plough; when the land was again harrowed and rolled, and cleared from root weeds. In a few days another crop of weeds had made their appearance; but they were again turned down, and the land worked as before; the next crop of weeds was lessened exceedingly by these operations. The field was then spread with a mixture of soaper's ashes and stable manure, which dressing being turned down by a shallow furrow, turnips were sown on the land on the 29th day of June, on one of the finest seed-beds ever witnessed. Thus this field had received five ploughings; the root weeds had been gathered and burnt three times, and four plentiful crops of seed weeds had been turned in and smothered. The land was as clean as a garden; and although another crop of weeds sprang up with the turnips, they were destroyed by the hand-hoe, and the crop of turnips was the best in that part of the country; the largest roots were drawn and reserved for winter use, the remainder being fed off by sheep and young cattle. By these means the land was so enriched, that the crop of barley which followed, was the admiration of the neighbourhood; the yield was prodigious, and sold for an extra price as seed. Clover was sown with the barley in the spring, which, after the crop had been harvested, afforded a considerable quantity of aftermath; and during winter, preparations were made for an early spring dressing of compost, lime forming one of the component parts; and which, laid on at the time of the first shooting of the clover, caused a rapidity of growth, which brought the hay to the scythe a week or ten days earlier than the generality of the crops in the neighbourhood; proving a great advantage to the growth of the second crop of hay. Both cuttings were very fine and the yield great. After the crops of hay were carried, the land was skim-ploughed and the surface well harrowed; it was then turned down by a deep furrow, and wheat was sown on it on the 12th day of October; the crop from which averaged, over the field, 40 bushels per acre, and was all disposed of for seed, to those very men, who had declared that such management "would not do in these parts."

IN an experiment of sowing corn *broadcast*, on the first of June, at the rate of one and a half bushels per acre, on rich land, General Harmon, of Wheatland, Monroe co., N. Y., obtained 18 tons of green stalks per acre. The stalks were small, and almost entirely without ears, and so full of saccharine matter, that the cattle ate them perfectly clean when dry, though they were not cut up fine. The yield was estimated at six tons dry fodder per acre, and was raised on a clover sod turned over and sown the last of May, and the corn cut Sept. 15. The saccharine matter, which goes to supply the corn in the ear, is retained in the stalk when not suffered to ear, and materially adds to its nutritive properties.—*American Agriculturist.*

ANCIENT CUSTOM.—The road which custom had marked out was beaten and smooth, and the farmer continued to travel upon it; it was a *circle* too, and brought him always to the place whence he had started, and he never lost himself. But travelling on one path and at one pace, we wear out the road and incapacitate ourselves from travelling at any other pace,—so, a long course of injudicious management and cropping, not only exhausts the land, but the practice of a science, the cultivation of which requires no exertion of mind, deadens the spirit of inquiry, and leaves the farmer an easy, unenquiring being, knowing nothing from himself, but governed by an hereditary feeling of obedience to ancient usage. HANNAM.

A New Principle in Horticulture.

CABBAGE.—Mr. H. M. Bidwell, of this city, has just sent us an elegant Cabbage-head from his garden, illustrative of a new principle in that important vegetable, accidentally discovered. About the middle of June, having some last year stumps, which had been set out for salad sprouts, he broke off three, about 3 or 4 inches long, and stuck them into the ground. They took root readily, and grew as thrifty as any other plant. Two of the threee have produced fine solid heads. The one before us measures two feet six inches in circumference, the open, outside leaves being all stripped off. It is of the drum-head shape. The other head is more conical, and apparently a different species. Plants may thus be obtained early, without the labor and attention required for raising them in hot-beds.—The principle is worthy of notice.—*Farmers' Gazette.*

For the Farmers' Cabinet.

Lime.

Messrs. Editors,—Having had some experience in the application of magnesian lime, and from that experience being firmly convinced, that large sums are annually wasted by farmers, who can but ill-afford it; not only in cost of the lime, but in the neglect of vegetable and animal manures, which the high encomiums on lime cause them to pass by; and honestly believing that the advocates for magnesian lime are doing much harm, with the best motives, I have written this rambling communication, with at least equally good intentions. I do not say that lime may never be wanting in a soil. But I do believe, that in the primitive formations of Chester county, 50 bushels to the acre are enough for 50 years;—plaster of Paris in small quantities, being in my estimation, all the mineral required. And here let me ask, Where is the proof that more lime is required than gypsum? As to "Lancaster county farmer's" analysis, it proves nothing. Plain farmers, like the most of us, cannot even tell what proportion of wheat is magnesia, unless he informs us how many thousand pounds of wheat were required to produce the one hundred of ashes? But surely it does not prove that land requires 30 or 40 bushels of magnesia to the acre—more especially when he informs us, that magnesia is "one of the primitive earths, which form all soils." And as they do not use magnesia in England, it must have been in the soil, as nature formed it. I think chemists find more gypsum in clover, than either lime or magnesia in wheat; and less gypsum in most soils, than carbonate of lime. Would a "Lancaster county farmer" on that account, advise us to apply 100 bushels of plaster to the acre? Is it not strange, that none of the advocates for magnesian lime, have ever shown us by fair experiment, its great benefits? If they have, it has surely not been in the Farmers' Cabinet. I think the experience of Mr. Kirkbride, and one or two other disinterested men are given, in which the part limed was either worse, or at least no better, if treated alike in other respects; and that is the only fair way to test it.

I have repeatedly offered $100 to any of my neighbours, that would show to competent judges, where a second application of magnesian lime, (no difference how long before, or in how small quantities the first application was made,) had done any good whatever. But would any man be foolish enough to make the same offer, if plaster, ashes, vegetable or animal manure was used? But, say the advocates for magnesian lime, look at the great improvement in the soil of South-eastern Pennsylvania, by the use of it. Indeed, a man unacquainted with agriculture might think, after reading some of their communications, that we had nothing to do but spread magnesian lime, and reap wheat—as I have heard farmers say, you may sow ashes and mow white clover; never having heard, perhaps, that those most successful in raising wheat, plough down clover, frequently with a good coat of stable manure, or compost into the bargain—taking care never to raise two *dry crops* in succession. I inquired of a Lancaster county farmer, one of the best in the county, how he contrived to grow so much wheat on his farm? His reply was, "by ploughing down clover—we can do nothing without that."

And I will here state, without fear of contradiction, that when I came to this neighbourhood, seventeen or eighteen years since, there was very little wheat grown,—not one-fifth of the present crop; no cattle fed, that could be called fat, unless stalled—where there are now five hundred of the best quality, fed on grass alone: and yet there was then more lime used, and had been for years, than at present: but there was not much clover sowed, very little plaster, and no exertion made to procure vegetable or animal manures: ploughing down clover was never thought of. I have not limed any for nine or ten years; as about that time I commenced reading agricultural works, in which I perceived much more stress laid on vegetable and animal manures, and an *improved system of cultivation*, than on lime. Farmers in England and Flanders, (the best cultivated countries,) lauding turnips to the skies; but consigning magnesian lime to what *Dilly Jones* calls "the dark cellars of popular estimation."

Here permit me to acknowledge the great obligations I am under to the Farmers' Cabinet, and other agricultural works; they have returned the money expended for them, some hundred fold. And although somewhat out of place here, I must further say, we could not raise a peach on my farm, until I followed the plan of wrapping the buts with straw, as directed in the Cabinet. We now have as good fruit as can be produced in the State of Delaware.

But to return: since I have quit liming, I have improved my farm much faster than before. But, say the limers, your land is just now showing the effect of the limings given it twelve or fourteen years ago! This reminds me of a conversation I had with a German friend, not long since. Well my friend, said I, that field of corn does not look quite so good as the one without lime! "I

know that," said he, "but lime does no good at first—it must have something to act on; wait until I plough down a good sod of clover and give it a dressing with stable manure; and then you will see what the lime will do." This, of course, was unanswerable. But I will add, that my most productive land has had the least lime; some of it, none, since I have been on the farm. One of my friends had some grass land, that had *run out*, as they say; and as the ground was rocky and difficult to plough, he was advised to *lime it on the sod.* Some years after, I asked him how it answered: His reply was, "not quite so well as if I had *tilted it into the creek;* as in that case I should have saved the spreading."

Another friend residing in Philadelphia, whose father has a country seat up the Schuylkill, informed me, that several of their neighbours and themselves, commenced making experiments at the same time with magnesian lime; and all—I think there were five or six of them—came to the conclusion, that it was of no use whatever, applied to land.

But, say the advocates for magnesian lime, show us your new system—your vegetable and animal manures—your plaster and clover, ditching and draining, without lime. Well, gentlemen, to please you, I will select a farm, easy to find, near West Chester, Pa., with a good rail road from everywhere to it. Perhaps some of you have seen an account of the *products of a Chester county farm*, in the Village Record, when the Hon. Charles Miner was editor. They were very great; but as I only write from memory, I will not pretend to give particulars; but you may be sure, it was one of the best, or Mr. Miner would not have sent the account over the world. The farm selected, belongs or did belong, to Eusebius Townsend. You will say, that farm is near the great valley, and Mr. Townsend, or some one before him, applied large quantities of lime. This is just what I thought myself at the time; but upon inquiry, two or three years since, I was informed, that it had not had one bushel of lime, within the memory of that noted personage,—*the oldest inhabitant.* And here permit me to remark, the best farms in Chester county are not lime-stone land, by any means. They are found in Goshen township, and among the hills of Brandywine.

Let me be understood; I do not say pure carbonate of lime is useless,—having none within my reach, I have never tried it. But, certainly it must require but a small quantity, if, as we are told, some of the very best wheat soils in England, contain but one or two per cent. of lime. If other soils have yielded 15 or 20 per cent. of pure lime, it only proves that pure carbonate of lime does not destroy vegetation, which is more than can be said for magnesian lime. But Mr. Lewis says, it requires less magnesian, than pure lime, and for that reason the magnesian is cheaper. Now, how did he find that it requires less? Not by trying equal quantities of each, but from the well known fact, that it required less magnesian lime to destroy vegetation, than the pure carbonate. If one pint of brandy will destroy human life, does it prove that a gill of it will do a man more good than a gill of milk, of which he may drink a quart with impunity? He finally uses Mr. Webb up by asking, if 600 bushels pure lime to the acre, will do ten times as much good as 60 bushels magnesian? I do not think 600 bushels of either would do much good, but I think the magnesian would do the most harm. Colonel Brooking, when asked which of his boys was best, replied there was no *best* among them, but he rather thought Harry was *worse* than Tom.

If Mr. Webb had said wonders have been produced by the use of clover, plaster, and an improved system of farming, in spite of magnesian lime, he would have been nearer the mark. Although, I must confess there can be shown many places in this vicinity, where magnesia has gained the victory, and *reduced* the crops at least one-third.

But there is nothing made in vain; we all know it makes good mortar, and perhaps might be useful in destroying the Canadian thistle, if the cure is not considered worse than the disease. Perhaps the Magnesians will ask, how can it be possible, that so many of our intelligent farmers have been so long mistaken? I will answer that question by asking another. How was it possible our intelligent physicians should have persevered for some hundred years, in pouring hot teas down the throats of feverish patients, who were crying for a drop of cold water to cool their tongues, and have only but lately discovered that what they so carefully kept from them, was the very thing that would have saved their lives!

But I have some hopes of the limers yet; I think they begin to see "something rotten in the state of Denmark." When I used to follow the trade of liming, the plan was to harrow it in, on ploughed ground, as soon as slacked; but I discover they now leave it in heaps, from one month to twelve, and then spread it on the sod. Go on gentlemen, I am with you there, I acknowledge it will not do quite so much harm, "cooked that way—its the seasoning that does it."

As I may receive a gold plough within

seven or eleven years for this communication, I think I will give my name in full for fear of mistake.

ISAAC WAYNE VAN LEER.

West Nantmeal, Dec. 27th, 1842.

For the Farmer's Cabinet.

Corn-stalk Sugar.

MESSRS. EDITORS,—I am mortified to find by Mr. Garnett's Address to the Agricultural Society of Fredericksburg, that our intelligent and interesting young friend, Mr. W. Webb, of Wilmington, Delaware, has failed in his arduous endeavours, to ascertain from an acre of well cultivated land, what would be the actual result, in a pecuniary way, of the manufacture of sugar from the corn-stalk; and particularly, that this disappointment had arisen, not from any fault of his own, but from a failure of the machinery and apparatus, which had been prepared on too slight and cheap a scale: but were it not for the fear that I shall be accounted "a prophet of the past," I would say, I always suspected that this would be the result. Few persons would be apt to calculate the expense attendant on even a small experiment in the making of sugar, whether from the cane, the beet, or the corn-stalk; all who know anything about it, however, are aware of the fact, that the process, even from the first, is proverbially laborious, careful and expensive. Mr. Webb's apparatus cost him about $300: I should rather add $1,000 to that sum; in my opinion, the cause of the failure in the attempts to make sugar from the beet, has arisen from the single circumstance of its never having been taken up on a sufficiently expensive scale; in France, there is no difficulty or delay experienced; but there, the machinery is equal to the labour required. Mr. Garnett informs us, that the mill for grinding the stalks, failed on the second day, marring the whole business; but fortunately, not until it had been again shown, that the thing is perfectly practicable, and the results such as to verify the most sanguine calculations, as to the quantity and quality of the sugar to be obtained. It would appear that Mr. Garnett was so fortunate as to meet Mr. T. Morgan, of Louisiana, at Mr. Webb's; with that gentleman I have the honour of a personal acquaintance, and can bear testimony to the fact, that according to his experience, the juice of the corn-stalk, as tested by the saccharometer, is two-tenths stronger than the juice of the Louisiana sugar-cane—a circumstance to be accounted for, only by the fact, that the cane does not fully ripen in Louisiana, so that the juice is *incipient;* and to this cause is, no doubt, to be attributed the difficulty which is experienced in the after-process, in manufacturing sugar from the cane in that latitude; where, also, the effects, either of an early or late frost, are so often felt and deplored, and by which their crushing season is materially shortened, and the direful results rendered irremediable. It has been seen, that the juice of the corn-stalk defecates remarkably easy, and goes on to the granulating point without difficulty and with perfect certainty—all which is to be accounted for, from the circumstance, that the corn has been perfectly ripened, and affords a juice properly concocted and matured; which is therefore shown, first by the saccharometer, and again, in the ease with which the granulating process is conducted to perfection.

I have been informed, that Mr. Morgan was so well satisfied of the probable results of the cultivation of the corn-stalk for the purpose of making sugar, that he, the last year, gave orders for the growth of a certain breadth, on his sugar plantation in Louisiana, the past summer, so as to give him a full boiling of juice for his vacuum pan, that the trial might be made on a scale sufficient to produce actual results, by which to calculate, in a pecuniary point of view, the real value of the corn-stalk in the manufacture of sugar, but that his intentions were frustrated—levelled to the dust—by a storm, which prostrated the corn, and entirely ruined his prospects. Now, I should be glad to learn, how his plantations of canes were affected by this storm, and whether they too were prostrated by it? because, if corn is less able to bear the effects of storms than the cane, and is more injured by being blown down, here is a serious difficulty at the outset.

It was reported that Mr. Webb had planted his corn very thick, with the view of rendering the labour of removing the ears unnecessary; would that gentleman inform us if he found any difference in the yield of saccharine, either in quantity or quality of juice, in those stalks from which the ears had been extracted, on comparison with those that had never shown a tendency to produce ears at all? and would he still recommend close planting in the rows; say an inch or two between the stalks? These are interesting questions; for, although I am not so sanguine as to believe with Mr. Garnett, that "sugar from the corn-stalk will, in a few years, be made in every State in the Union," yet that it will become a staple manufacture in the Western States, where the price of corn is from 12½ to 25 cents per bushel, I have no doubt; the *result*, however, being equally

beneficial to the Eastern States, as having a tendency to keep Western corn from their markets, and giving employment to thousands of emigrants, as well as others, in the legitimate pursuits of agriculture—a *manufacture* which, unlike many others, will be found productive in a most remarkable degree, of the means of renovating the soil, not *simply and singly*, by affording manure to the land, but in first affording food of the most valuable quality, for almost every kind of stock; while the cultivation of the crop itself, will insure the most perfect system that can be introduced into the field, as there is no doubt the repetition of the same may be followed with impunity for any length of time, the ample returns of manure being sufficient for the perfect renovation of the soil for ages.

I have been favoured with a view of some samples of sugar made by Mr. Webb, the present season; it is sweet, clean, and well grained—the only requisites with those who are acquainted with the fabrication of sugar. It has been objected, that the grains are not large and fully developed—it is only a wonder that any grains at all should be made to appear, from the manner in which the granulating process had been compelled to be carried on; Mr. Morgan, with his 10,000 gallons of liquor at 45°, would soon be able to give a better account of the matter. H. C.

Newcastle, Delaware, January 2nd, 1843.

Fatting Swine.

The food of swine is as much better for being cooked as the food of man. It is more palatable, more healthy, and much more nutritive. The digestive powers of swine are not as easily deranged as those of man, and the former can digest food which the latter cannot. Yet there is great economy in fatting swine on cooked food. Like man, they require a change of diet for health and thrift. From our own experience we have come to the conclusion, that there is a saving of one quarter of the food—more particularly in the article of corn. Some farmers have said that there is a saving of one-third in soaking it for horses. But instead of grinding, scald your corn until it becomes soft, and salt it to your own taste. If your hogs lose their appetite, as they frequently do, by feeding steadily on one sort of food, give them a change for a few times, and they will eat greedily of the old dish again. Let their trough and feed be kept clean, and their lodging dry and warm, so that, as Cobbett says, you would be willing on a pinch of a stormy night, to turn into it yourself, if you could not find a better place. This mode of fatting is very agreeable to the swine, and economical for the feeder. If every farmer in our country will adopt our directions, what an immense annual saving would it be to the nation.

Exchange Paper.

Plum Pudding.—Beat eight eggs very light, add one pint of milk, one quart of flour, and three quarters of a pound of butter after it has creamed; cut and stone your raisins, rub them in flour and mix them in the batter with half a nutmeg, wet your cloth, flour it, tie it up tight, and shake it frequently to prevent the plums from settling at the bottom; put your pudding in when the water is boiling; have a plenty of water; two hours will boil it well. The sauce used is made of sugar, wine and nutmeg.—*Southern Planter.*

A Cheap Paint.—Take one bushel of unslacked lime and slack it with cold water: when slacked, add to it 20 lbs. of Spanish whiting, 17 lbs. of salt and 12 lbs. sugar. Strain this mixture through a wire seive, and it will be fit for use after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. In order to give a good color three coats are necessary on brick, and two on wood. It may be laid on with a brush similar to whitewash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before, one bushel of unslacked lime, 3 lbs. of sugar, 5 lbs. salt, and prepare as above, and apply with a brush.

I have used it on brick, and find it well calculated to preserve them—it is far preferable to oil paint. I have also used it on wood, and assure you that it will last longer on rough siding than oil paint will on planed siding or boards.

You can make any color you please. If you wish a straw color, use Yellow Ochre instead of whiting: for lemon color Ochre and Chrome Yellow; for lead and slate color, Lampblack; for blue, Indigo; for green, Chrome Green. The different kinds of paint will not cost more than one-fourth as much as oil paints, including labor of putting on. *Ontario Freeman.*

THE FARMERS' CABINET,
AND
AMERICAN HERD-BOOK.

Philadelphia, First Month, 1843.

We have lately received the last number of the first volume of the "British American Cultivator," edited by Wm. Evans, and published at Toronto, in Canada. We looked over this paper with much satisfaction, and should anticipate from its tone and general appearance,

that the agriculture of Canada will find in it, a valuable and efficient assistant. The farming interests of that country, cannot fail to appreciate the labours of a journal, so well calculated to promote its substantial wealth. Quite amusing, as well as instructive extracts are given from speeches delivered at the North Allerton Agricultural Society in England. The vice president finds fault with the Society for confining its "attention too much to the breeding, and exhibition of stock," and thinks that ploughing, sheep-shearing, &c., are of sufficient importance to claim a share, at least, of its notice. "Why only give premiums," he asks, "to sheep, and cattle, and pigs, which are crammed and fed by all sorts of manoeuvres," and "pampered with sago and new milk!" He mentions a case at Bristol, of a cow that was nourished by the milk of three or four others, and which after her produce had been measured to swell the account of her milking properties, would turn round to the bucket, and drink up the very milk herself had just yielded. John Bull knows how to do these things, about as well as we Yankees.

Our West Nantmeal correspondent has struck off into a new path, in relation to the use of lime. This is well—we like variety in our columns, when it is calculated to lead to useful inquiry, and give thoughts to the thoughtful. Some of our readers, who have perhaps in their lives, never had a doubt that lime has done, and is doing, almost every thing for the Agriculture of the middle States, will be surprised to find our friend Van Leer, eschewing its use almost entirely—turning aside from the advocates of pure lime, as well as magnesia—from B. Webb and S. Lewis, and declaring that one of the *best*—and as a friend at our elbow, is this moment describing it—"one of the most *splendid* farms in Chester county," has never been limed within the memory of man! and on the top of this, asserting that himself has "not limed any for nine or ten years," and that he has improved his farm much faster since he quit liming, than before.

This controversy about lime, has reminded us, and no doubt it has others also, of Dr. Franklin's Chinese *shoe*, with the *manner* of wearing which, he so puzzled the philosophical heads of some of his friends. After tasking their contrivance to the utmost—one declaring it should be worn in *this* way; and another that it could only be worn in *that*,—why, gentlemen, said the Doctor, have you settled the point, that it is by any means a *shoe?* or that it was intended ever to be *worn* at all!

We have recently noticed upon the shelves of Kimber & Sharpless, under our own roof, a new and enlarged edition of Comly's Spelling Book, in a neat and very cheap form. This work has been for many years, extensively known, as being well adapted to the use of children, in our private and public schools. To this new edition has been added "a variety of useful exercises, so arranged as to familiarize the pupil with the correct spelling, pronunciation, and meaning, of about two thousand ambiguous, or difficult words."

With this addition, it is believed Comly's Spelling Book will be found to contain a greater amount of useful and appropriate matter, than any other work of the kind published in this country, at the low price of *one dollar per dozen.*

To prevent confusion in the classes, or needless expense to parents, the publishers have placed all the new exercises at the end of the book; so that the "Enlarged Edition" can be conveniently used in the *same class*, with their former editions.

In "The United States Almanac," which was noticed in our last number, as published by E. H. Butler, of this city, we have observed a table at page 34, giving the decimal of the year, for every day from its beginning to its close. This is particularly convenient for the calculation of interest. If we would know the interest on a certain sum, for a certain number of days, we have only to multiply the yearly interest, by the *decimal* of the year, opposite the number of days in the table. If we would ascertain the interest on a certain sum, for the interval between two certain dates in the same year, we subtract the decimal of the prior date, from that of the posterior one, and multiply the difference by the yearly interest.

We stepped in a few days ago, to look at Tonkins' fine cattle, which the owners are now exhibiting in this city for the examination of the curious. They are all here—the six steers and the spayed heifer. We understand they will be slaughtered about the 22nd of next month. New Jersey may safely challenge the world to produce such a lot of cattle from the herd of one man.

From the "Constitution," published at Woodbury, N. J., we learn that Benjamin B. Shuster, of the "Grove" farm, in that vicinity, slaughtered, and brought to our market, on the 3d ult., two calves, which weighed alive, 600, and 562 pounds, respectively. The weight, when dressed, of the first, was 400,—that of the second, 375 pounds. They were between six and seven months old, and were raised and fed by our friend above named.

At a meeting of the Philadelphia Agricultural Society, held at their hall, on the 4th inst., an election of officers for the ensuing year, was held, and the following were duly elected, viz:

Nicholas Biddle, President.
Dr. James Mease, James Gowen, } Vice Pres'ts.
Aaron Clement, Secretary.
Wm. M. Uhler, Assistant Sec'ry.
Algernon S. Roberts, Treasurer.
Aaron Clement, Librarian.
Charles Roberts, Wm. M. Uhler, } Curators.
James Gowen, George Blight, } Com. of Corres.

By order of the Society,
Wm. M. Uhler, Assistant Sec'ry.

A prolific sheep.—Samuel Allinson, of Crosswicks, N. J., informs us that his neighbour Joseph Hendrickson, has a fine Southdown ewe, which last spring gave birth to four lambs, one black, and three white; which all lived, throve, and are now doing well.

☞ NOTICES, which are essentially advertisements, are sometimes received, with a request that we would insert them. Although the Cabinet is not professedly an advertising paper, the proprietor would be willing to deviate a little from the plan which has heretofore been pursued, and insert to a very limited extent, short advertisements, the subject matter of which, may be in character with this paper. The terms will be one dollar for each insertion of ten lines or less, and so in proportion for each additional line. The money to be paid in advance. An advantageous medium will thus, we think, be opened for our agricultural friends to make their wants known, as well as to have them supplied.

WE had made some extracts from an Address before the Fredericksburg Agricultural Society, by J. M. Garnett, Esq., and intended them for the present number. They are, however, crowded out, and will have to rest for a month.

IT is a common saying, that *punctuality* is the *life* of business; and perhaps no class of the community more thoroughly assents to the truth of it, than periodical publishers. Many of our subscribers give us the best possible proof of their good wishes, and interest in our concern, by an early transmission of the small sums due us. Others, from lack of opportunity, or through forgetfulness, fail to let us hear from them quite so promptly as would be desirable. Others again, and not a few, have suffered their subscriptions to remain unsettled for two or three years. *Now these are debts of honour, and we depend on that for their collection.* Some may have long ago ceased to desire the Cabinet, yet have failed to let us know it: how then can we ascertain their wishes? If among those to whom our paper is regularly forwarded, there are any of this description, who do not expect, or mean to pay us the small amounts due, will they not so far do as they would be done by, as to acquaint us, through the post-office, or otherwise, with their intentions? And where subscribers fail to perform this duty, which to ourselves appears so very reasonable, we would be greatly obliged to post-masters to advise us accordingly. We would be very reluctant to send our paper where it may not be desired, and we really cannot afford to send it where it will not be paid for.

THE quantity of rain and melted snow which fell in the Twelfth month, (December,) 1842, was 3.657 in.

Pennsylvania Hospital, First mo. 1st, 1843.

The quantity which fell in the year 1842, was a little more than 48¼ inches; to wit:

In the 1st month,	.....	1.358 inches.
2nd	"	4.265
3d	"	2.835
4th	"	5.307
5th	"	5.865
6th	"	3.192
7th	"	11.805
8th	"	3.786
9th	"	1.269
10th	"	1.712
11th	"	3.487
12th	"	3.657
Making		48.538 in. 1842.

The quantity which fell at the Hospital in 1841, was 55½ inches: and the average quantity which fell at the same place for the last thirty-three years—from 1810 to 1842, inclusive, was ..... 38.551 inches.

CONTENTS OF THIS NUMBER.

Sketch of Robert Bakewell. ..... PAGE. 169
Farms on Leases. 173
The Swallow. 173
Oil of Indian corn.—Magnesia. 176
The Angus Cow. 177
Barometrical Observations.—Bee-keeping. 178
Exercise.—The Box Tunnel. 179
Setting post-and-rail fence.—Large Pear tree. 180
Peach worm.—Cranberries. 181
Fallowing. 182
Structure of the Horse's foot.—To preserve flowers. 182
New method of making fence.—Grow Asparagus. 184
Colostra. 185
Agricultural Exhibitions. 186
Cultivation of the Currant. 187
Farm Leases. 189
Ploughing match at Port Penn. 190
The Honey Bee and Ant. 191
Germantown Cow. 192
Ruta-baga Turnip. 193
Lime. 195
Corn-stalk Sugar. 197
Fatting Swine.—Editorial Notices. 198

THE FARMERS' CABINET,

IS PUBLISHED MONTHLY BY

JOSIAH TATUM, No. 50 NORTH FOURTH STREET, PHILADELPHIA.

It is edited by JAMES PEDDER and the Proprietor, and is issued on the fifteenth of every month, in numbers of 32 octavo pages each. The subjects will be illustrated by engravings, whenever they can be appropriately introduced.

TERMS.—One dollar per annum, or five dollars for seven copies—*payable in advance.*

All subscriptions must commence at the *beginning* of a volume. Having lately struck off a new edition of one or two of the former numbers, which had become exhausted, we are now able to supply, to a limited extent, any of the back volumes. They may be had at one dollar each, in numbers, or one dollar twenty-five cents half-bound and lettered.

For seven dollars paid in advance, a *complete set* of the work will be furnished; including the first six volumes *half bound*, and the seventh volume *in numbers.* Copies returned to the office of publication will be neatly half bound and lettered at twenty-five cents per volume.

By the decision of the Post Master General, the "Cabinet," is subject only to newspaper postage: that is, one cent on each number within the state, or within one hundred miles of the place of publication out of the state,—and one cent and a half to any other part of the United States—and Post Masters are at liberty to receive subscriptions, and forward them to the Publishers under their frank—thus affording an opportunity to all who wish it, to order the work, and pay for it without expense of postage.

From the Steam-Press of the late Proprietors and Publishers.